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DAILY CONSULAR *and* TRADE REPORTS

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No. 3242

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OLIVE OIL TRADE.

ITALY.

GOVERNMENT ACTING AGAINST ADULTERATION—ANNUAL EXPORTS.

Consul James E. Dunning, of Milan, presents the following information of the efforts of the Italian Government to insure the purity of olive oil, and of the statistics of exports:

The royal commission appointed by the Italian Government as a part of its determined effort to stop the adulteration of olive oil, has reported that it approves the method proposed for the application of the new law of April 8, 1908, which has prevention in view.

The law provides for the strictest inspection and accountability among all manufacturers, shippers, dealers, and storehouse keepers. Elaborate provision is made for the testing and analysis of samples, and for the taking of samples by Government hands and in the actual presence of Government officials empowered under the new law so to act. Whenever there results from the analysis, which must be made "as speedily as possible," evidence of fraud in the preparation of the oil, immediate proceedings must be instituted by the inspecting officials before the proper judicial authorities of the country.

An important paragraph in the regulation governing the enforcement of the new law provides that exporters of olive oil who desire to have the purity of their product established at their own request may do so by application to the authorities of the custom-houses through which they ship out of Italy. The customs officers are required to take samples and make the analysis without delay, and to issue thereupon a certificate of purity should such action be justified by the test.

A small tax is placed upon oil tests made by customs authorities at the request of the exporters. As the consulate has already stated in a special report on the subject, there is every evidence to show that practically all Italian export olive oil is pure on leaving Italy.

OLIVE OIL EXPORTS LAST YEAR.

Italian exports of refined olive oil in 1907 in quintals of 220.46 pounds each are stated by the customs authorities, with a comparative statement for 1906 and 1905, as follows:

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(RECAP)

Exported to—	1907.	1906.	1905.
	<i>Quintals.</i>	<i>Quintals.</i>	<i>Quintals.</i>
United States	29,188	71,400	38,687
Austria-Hungary	28,998	22,203	7,752
Germany	15,690	11,132	5,490
Great Britain	5,861	9,432	4,102
Holland	12,648	23,519	8,408
Switzerland	7,626	11,294	6,936
Egypt	15,353	19,285	4,867
Other countries	8,536	8,894	4,900
Total	124,881	177,172	81,658
Total value	\$1,491,122	\$2,061,652	\$945,800

The second table shows the exports of all other grades of olive oil to the various countries named in the custom-house records:

Exported to—	1907.	1906.	1905.
	<i>Quintals.</i>	<i>Quintals.</i>	<i>Quintals.</i>
Austria-Hungary	19,013	25,834	18,283
France	60,766	116,312	43,191
Germany	17,793	21,222	11,058
Great Britain	25,000	29,737	22,184
Russia	26,677	22,854	29,765
Switzerland	7,124	8,819	5,668
Egypt	2,636	5,810	1,956
United States	82,198	95,258	52,577
Brazil	14,495	12,320	8,820
Argentina	90,347	109,194	58,256
Uruguay	9,402	8,190	3,893
Other countries	32,976	33,032	17,440
Total	388,427	488,582	273,101
Total value	\$9,370,801	\$11,787,041	\$6,852,104
Grand total	513,308	665,754	354,759
Grand total value	\$10,861,923	\$13,838,693	\$7,797,704

The home production of Italian olive oil in 1906-7, one of the regular "off years" for the crop, is stated by the Milan Commercial Museum to have been 1,113,350 quintals, which is the lightest crop since that of 1896, excepting only the yield for 1899, which was 870,000 quintals.

GOVERNMENT TO AID THE TRADE AND INDUSTRY.

The great irregularity of the Italian olive crop, rendering the export feature of the trade extremely difficult and creating the necessity for making large imports of cotton-seed oil from the United States to supply the deficiency of short years, has induced the Government to take action toward the improvement of olive culture much like what it has done to establish a high standard of purity for the exported oil. Early in May a Government commission, appointed to deal with the difficulties surrounding the cultivation of olives and the creation of a more or less regular output of oil, met at Rome.

Among the questions discussed by the commission, according to the reports which have reached the consulate through various good sources of information, were the new law for giving official character to certificates of purity; the establishment of premium competitions in the oil-producing districts to encourage cultivation among the farmers; the result of experiments conducted by the Government's experts during 1907 in the search for a better means of attacking the parasites characteristic of olive culture; the proposals related to a further cam-

paign against insect pests during 1908, and a study of a long report rendered by a member of the commission on the diseases of olive trees.

The attitude of the Italian Government toward the whole matter probably means that eventually there will be a considerable falling off in the amount of American cotton-seed oil imported into Italy to make up for short crops here, while it appears to the consulate to absolutely sustain the contention of this office that adulteration is practically unknown in Italian export oil. Most of the adulteration which is under official consideration takes place in Italy, it is believed, by mixing cotton and other oils with the native olive oil. It is safe to say, however, that the Italian olive oil shipped to the United States is pure. At all events, it is now the intention to fix that purity by means of an official standard.

ALGERIA.

ANNUAL PRODUCTION OF THE OIL.

Consul James Johnston, of Algiers, writes that the production of olive oil in Algeria for the season of 1905-6 was 43,986 metric tons of 2,240.6 pounds each, against 41,898 tons in 1904-5; 28,608 tons in 1903-4; 21,782 tons in 1902-3; 25,055 tons in 1901-2, and 21,890 tons in 1900-1901. There are no official statistics prior to the last-named period.

INLAID LINOLEUM MAKING.

MODERN SCOTCH METHOD OF PRODUCING THIS FLOOR COVERING.

Consul John N. McCunn, in his annual report covering Dunfermline, furnishes the following description of the Scotch manufacture of linoleum:

Inlaid linoleum is making rapid strides in public favor. It is more expensive, as the colors are not merely printed on the surface of the fabric, but are solid all through. Under the original patent it was manufactured by means of stencils. The fabric which was placed on the canvas foundation was a mixture of oxidized linseed oil and ground cork, and to this mixture was added the desired color. By means of a stencil apparatus the black colors of a pattern were laid down on the canvas; thereafter the red parts were also laid down, and so on, and after the pattern had been completed the whole was subjected to hydraulic pressure and then dried.

This patent has expired, but a new process has been introduced in which each color is manufactured in sheets. A sheet is passed through a cylinder having knives which cut out the requisite parts of the color for making the pattern, and the machine deposits these parts on the canvas in the appropriate places. Each successive color is dealt with in this way, and after all the colors have been laid on the whole is subjected to heavy pressure. The benefit of this new patent, which has not expired, is that the division lines between the different colors are much more clearly cut at the joinings. The machinery for this new patent is very elaborate, the works being about 120 feet high, while the machine itself is nearly 110 feet high; the building and equipment cost about \$340,655, and there are some fifteen flights of steel stairs built into the machine.

SOUTH AMERICAN CANVASSING.

VARIED EXPERIENCES OF COMMERCIAL TRAVELERS TO BE AVOIDED.

Consul George A. Chamberlain writes that though the United States sold to the Brazilian port of Pernambuco during 1907 over \$1,250,000 worth of goods, only about a dozen American commercial travelers visited the port during the year, eight of them calling at the consulate. The consul thus reviews trade-getting methods:

It seems as impossible to convince American firms who are trying to enter the export market of the importance of good travelers as it is to persuade them to pack merchandise with due reference to the distance it has to travel and to the mode of transportation.

Travelers can not be had for nothing. The cheap ones invariably turn out to be very expensive and often permanently ruin a market for the careless firm that employs them. Three glaring examples have come directly under my notice during the last eighteen months. Two of the three representatives in question had evidently been employed on the sole consideration of a speaking knowledge of Spanish. Their ideas of business methods in general were hazy and they were absolutely ignorant of the simplest formulas of foreign trade. To my surprise they all represented firms well known throughout the United States.

A DISASTROUS TRIP.

The first of the three came out on an arrangement by which he was to receive \$4,000, the first \$1,000 in New York, the next at Buenos Aires, the next at Valparaiso, etc. He spent \$700 on his outfit and passage from New York to Pernambuco, and never having heard of a letter of credit, express checks, draft payable to self, or even a money belt, bought three \$100 notes and put them away in a cardboard box in his steamer trunk, which was frequently left open during the voyage.

After landing at Pernambuco he discovered that he was penniless, and then began a comedy of errors which lasted for months. He cabled for money; the firm sent \$100 to the telegraph office to be wired. It took the firm three months to find out that the money had never been sent and three more to learn that it is impossible to wire money to Brazil through any cable company.

In the meantime the traveler was in absolute distress. Not having received the \$100, he continued to cable on borrowed money. The tangle took eight months to straighten out. The firm lost their original \$1,000 and the \$100 which they tried to wire to Pernambuco and finally sent there by draft. The traveler lost his credit and reputation and has been practically destitute in Rio and Buenos Aires for a year and a half, unable to get home and sure of trouble if he does. All this through sending one wholly ignorant of specialized work.

A BORROWING TOUR.

The second case was that of an American who arrived at Pernambuco in financial difficulties. He was sent with a fine lot of samples and \$1,000 to Rio de Janeiro. To his great surprise he had to pay \$600 duties on the samples. He soon exhausted what money he had left and started cabling for funds. His firm wired orders on Bra-

zilian banks, always sending about half what their representative required to meet past obligations. He could not remain idle for two months waiting for proper funds and went ahead, covering all southern Brazil by borrowing from each customer enough to see him to the next town. His firm was well known and he managed to get the money, but with what damage to the credit of his employers can easily be imagined. He was still borrowing when he arrived at Pernambuco and told the writer that he owed sums of \$50 and \$100 as far back as Rio Grande do Sul, which he had left two months before.

ANOTHER DISASTER—LESSONS LEARNED.

The third case was that of an American who came to grief through being allowed to stay six months in one place and run up \$1,000 debt for board and cablegrams before his employers found out that there was something wrong.

These three cases contain several lessons to firms and travelers alike. Inexperienced houses who wish to establish or increase their trade in Brazil should give the following considerations their careful attention:

There is an abundance of trade here always, and that it is worth going after can easily be seen by studying the statistics showing the purchasing power of the country. To secure a share in this trade it is absolutely necessary to send representatives. A deaf and dumb person, however, who knows how to do business and keep cheerful is a far better representative than a linguist who never saw a letter of credit or an order blank.

EXPENSES ARE HIGH.

American firms in arranging to send a man to do \$50,000 worth of business who they can not trust with a letter of credit for \$3,000 should not send him. Remember that a man who travels through South America and keeps his expenses down to \$10 a day is doing it cheaply. A bookkeeper on the Amazon gets \$500 gold a month and finds it difficult to live within that income.

If the representative of a firm is to be away more than a year, he should give bond. It will steady him and his principals will not be so reluctant to back him up when he needs help in an emergency.

People, customs, banking systems, and business ways are different in South America from those that obtain in the United States. A traveler in his first trip encounters new and peculiar circumstances, and if he is harassed by improper and insufficient connections with his base of supplies he will fail, and South America will be regarded as being too "pioneering" and too expensive, when the truth is that a cheerful word from home and prompt backing would have saved the situation even after a bad start. It must be remembered that the traveler is on the spot and dealing with a network of trade regulations that are not experienced in the United States. When he lands, the custom-house holds his samples until the duties are paid, and they have to be paid in a certain way: sometimes it takes three days, and it always requires a professional despatcher. When he gets on shore, a revenue officer calls for the local tax on commercial travelers. This tax varies in different cities from \$30 to \$300. Besides these details, he will find railways with triple baggage rates. One man paid \$50 gold on his baggage from Sao Paulo to Rio de Janeiro, a

distance of about 300 miles, only to find later that there is a special scale for sample trunks that would have cut the bill two-thirds.

If one has a good representative who does not talk Portuguese, a line of samples may be given him that will do the "talking."

ADVICE TO INEXPERIENCED TRAVELERS.

For the guidance of the commercial traveler about to visit South America the following schedule of suggestions is offered:

Do not start out before you are an experienced salesman. To be able to take an order automatically, and take it right, is an essential—just as necessary as to be able to get the order. A slip of the pencil or a little misunderstanding as to terms has often permanently lost a good customer.

Your salary and an average of \$10 gold a day for expenses is the least you can work on comfortably.

Map out your trip before starting, remembering always that your time is not money to the people you are going to deal with, and that if you are going to try to hurry them you might as well stay at home.

If you have five days in a town spend three getting acquainted. You will find that many a merchant who is altogether overstocked when you first see him, if he takes a liking to you, after a few days will find several empty shelves.

If it is your first trip call at the consulate at once. You can save time by learning there how to clear your baggage, where to put up, by getting a list of firms buying your line and by learning on what days you can get boats or trains to the next port, etc.

If you are empowered to give credits, arrange introductions from the New York branches of the South American banking systems to their different managers. Three concerns would cover the whole coast, east and west. On the east either the London and Brazilian Bank, London and River Plata Bank, or British Bank of South America. On the west coast the Grace system. Consuls are not allowed to give any opinion on the financial standing of firms or individuals, and for such information you will be more or less dependent upon the banks. A letter of credit is the best kind of introduction to a banker.

Do not start out with the idea that you can wire for money at any time. Counting in the charges for cabling and bank discount it costs between \$20 and \$25 to send \$100 to any town in this district, and even then there are few firms at home that know how to go about it.

Keep up your spirits. A quiet, cheerful salesman can place an order in an overstocked house when a gloomy man finds it hard work to draw an order from a merchant who needs the goods. Business is not always exclusively business here—sympathy is apt to be mixed with it.

MEXICAN NOTES.

Consul William W. Canada sends from Veracruz the following business notes concerning that part of Mexico:

A new insurance company has been organized by some of the merchants and capitalists of Veracruz, *Compañía de Seguros Veracruzana*. The capital of the company is \$500,000 Mexican currency, or practically \$250,000 United States coin.

The passenger engines on the *Ferrocarril Mexicano*, on the division from Veracruz to Orizaba, have been converted into oil-burning engines, the fuel oil being supplied by the extensive works at Minatitlán, State of Veracruz. Several large storage tanks have been erected on the outskirts of this city. The fuel oil is brought here by tank barges.

The new electric car line of Veracruz was inaugurated on July 5, the 10 cars in use being from the United States, and the power plant equipment from Germany and Switzerland. The old plant of the company could not furnish power for operating small motors, electric fans, etc., during the day, but now these electric appliances will come into more general use.

NEW CHEMICAL DISCOVERIES.

COMPOSITIONS TO ACT AS SUBSTITUTES FOR MANY ARTICLES.

Consul Maxwell Blake, writing from Dunfermline, gives the following account of two new European compounds which are designed for a diversity of uses:

The discovery has just been announced in Scottish newspapers of a substance composed of a mixture of seaweed, carpet dust, goat's hair, Irish moss, and gums, together with some secret chemical ingredient or process, which produces a composition said to be a good substitute for leather and various other materials, as it can be used equally well in a fluid, pliable, or hard state.

It is admitted by the discoverer that his composition is not equal in quality to the best materials imitated; but he claims as to leather that it provides an excellent substitute for the manufacture of articles of the cheaper grades of goods. The product has already been made up into boots and shoes, and its durability successfully tested by policemen, postmen, and others whose duty involves a large amount of walking. Two or three thousand feet of belting in machine shops is also in use at the present time, to which purpose it is said to be especially well adapted, as it is impervious to oils and acids, is noninflammable, and does not shrink under the varying conditions of the atmosphere.

In its hard state it is said to be a cheap and practical substitute for vulcanite, and can be purchased for less than one-fourth the price of the latter. Imitations of marble and wood are produced by hydraulic pressure, the seaweed suggesting the veins or grain. In its fluid state it can be applied to a floor, and when allowed to set it forms a permanent surface of linoleum. The seaweed is obtained from Devonshire, and the more expensive varieties for the manufacture of marbles from Japan.

SOON TO APPEAR ON THE MARKET.

As a factory for the manufacture of this unnamed product is now in the course of construction, it is likely to very soon appear as a marketable commodity.

Another chemical discovery, or rather rediscovery of what was an old Roman secret known to have been used about six hundred years ago, which likewise seems full of practical possibilities, is a liquid preparation to prevent iron rust and wall dampness. When applied to the bottom plates of ships it is said to prevent oxidation, animal or vegetable marine parasites and growths, and, besides preserving the life of the iron plates, will also add to the speed of liners and war ships. When the inside of a ship is coated over with this liquid it stops the "weeping" of the inner skins of the iron sides, which, as shippers so well know, is so often the cause of much damage to ships' cargoes.

Freshly plastered rooms when painted with the same preparation, admit of immediate occupancy or decoration, as the paper can be applied without delay or damage. The tests have extended over a period of many months and the results have been announced as successful. My inquiries to date, however, have failed to elicit any definite information as to its commercial manufacture, as it is reported that experimentation has not yet been concluded.

PORT OF DURBAN.

ITS GROWING IMPORTANCE AS A COALING STATION.

Consul Edwin S. Cunningham, of Durban, gives the following account of improved harbor facilities and the increasing trade of Natal's chief seaport:

Improvements in the harbor at Durban have been noted in former reports and attention called to the excellent facilities offered for the handling of cargo and the coaling of vessels. As a coaling station Durban is of growing importance, and it has been the endeavor of the port department not to permit her transit trade to diminish because of any want in facilities given. The average low-water depth at the harbor entrance was increased to 32½ feet. Four 60-hundred-weight hydraulic cranes and two hydraulic capstans for moving wagons were added to the port equipment. The coaling appliances were put into operation during the first half of the year and have greatly facilitated coaling.

The total tonnage trade of the port for 1907 was 1,620,956 tons, of which 482,337 tons, value \$37,648,558, were imports and 1,138,619 tons exports. Coal constitutes the principal export, 991,255 tons, value \$3,917,532, being exported, while other merchandise only totaled 147,364 tons. The total trade for 1906 was 1,354,192 tons, the imports being 563,158 tons, the export of coal 703,870 tons, and of other cargo 87,164 tons.

Glassware Sales in Matamoros.

Consul Clarence A. Miller reports that the glassware purchases—mostly window glass—of Matamoros, Mexico, amount to about \$1,500 gold annually, but are growing. The purchases are made from Monterey jobbing houses, the goods coming from Germany. The consul sends the names of the Matamoros dealers in glass articles, which may be obtained from the Bureau of Manufactures.

The Mexican Herald notes the first shipment of refined kerosene oil from Minititlan, Mexico, to Europe, consisting of 23,000 gallons.

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FLOUR MILLING INDUSTRY.

THE UNITED KINGDOM.

GERMAN FLOUR AND THE REBATE SYSTEM—EFFECT ON EXPORTS OF AMERICAN FLOUR.

In the following report from Glasgow, June 27, Special Agent M. H. Davis describes German flour in the markets of the United Kingdom and the Continent, and the effect of the rebate system on American flour exported to those countries:

The German Government seems recently to have adopted methods of duty administration particularly favorable to such German millers as may desire to export flour. Naturally such millers have found very satisfactory markets for their product in Holland, Belgium, the Netherlands, and Switzerland, under the existing arrangement. The Dutch millers and important milling firms in Switzerland have, as it were, risen in arms against this commercial invasion. Those in the latter-named country have been influential enough to secure the summoning of an international convention to consider the case as between Germany and Switzerland. Arbitration has been provided for and a full discussion of the question will soon be entered into. Whatever the result it will only decide as to the merits of the subject as between the Swiss and German Governments.

REBATE EQUAL TO AMOUNT OF DUTY.

Under the regulations which appear to have been put into effect about the first of the present year, the German miller, for every 100 kilos of flour exported, receives a rebate of the duty paid by him on 160 kilos of imported wheat. This is said to be allowed on patent flour only and is based on 62 per cent extraction. I can not learn of anything in the administration of this regulation that will prevent a greater extraction of patent flour from receiving the same generous treatment. At any rate, since the entire extraction possible, including all grades of flour, is not likely to exceed 75 per cent of the weight of the wheat, the provision for 62 per cent must be highly satisfactory to the German exporting miller. The duty on wheat is marks 5.5 per 100 kilos, which equals 36 cents per bushel of 60 pounds. Thus, having paid the duty on wheat the German miller exporting flour and receiving the rebate gets nine-tenths of 1 cent per pound for every pound of flour so exported. Just how much profit is net to him can not be ascertained and must depend on how he maintains

prices at home on his feed offals and on the low grades of flour. But to receive a payment from the Government of \$1.76 per barrel, when his nonexporting competitor at home gets nothing, must greatly stimulate the importation of wheat into Germany if good markets can be found in other countries for her flour. It makes possible an arrangement between the exporting and nonexporting millers by which home prices can be maintained, the exporter supplying the non-exporter with such imported wheat as he may require at current home market price, and possibly relieving him of part of his surplus of high-grade product. The home market in Germany is limited for the high grades of flour, and it was on presentation of this fact to the Government that the German millers were enabled to have the rebate system applied to their product of "patent." On the basis of 62 per cent of the entire weight of wheat, the standard of excellence of such a patent is not especially high, being about an 85 per cent patent, and yet it may prove a very saleable flour.

ADVANTAGES TO GERMAN MILLS.

The situation is a grave one for millers in America as well as to those in Switzerland. I understand the latter are willing to concede the allowance of duty on 125 kilos of wheat for every 100 kilos of flour exported, but even that would seem to be allowing a bounty on 100 kilos flour, equal to the duty on 25 kilos of wheat. If the German people can not absorb the high grades of flour her mills produce, surely the consumers must pay correspondingly, since the mills are allowed to get back the entire burden of duty in the ratio of 160 to 100. The gravity of the case as presented to American exporting mills, and in fact to the millers of the United Kingdom and Western Europe, is that the German millers are enabled, under good or adverse crop conditions at home, to solicit trade beyond the German borders and always at exceedingly low relative prices. Their agents' circulars to the flour buyers in Great Britain call attention to the "export premium," as they term it, "amounting to 2 shillings and 6 pence per sack of 280 pounds," or, say, 42 cents per barrel. It is impossible to know just how this "premium" is arrived at, or whether it will actually in practice work out this sum or a greater sum per barrel, but it is such as to permit of quotations being sent all over Great Britain that are lower than American prices. I know that some trade is actually being worked both at Glasgow and London, and it is fair to presume that other points have also placed considerable orders.

AMERICAN SALES IN GLASGOW.

The German agents guarantee delivery within two and three weeks from date of order, under mill or private brand, in lots of 400 bags or over, payable cash against documents, with an allowance of 1 per cent. The price is based on London delivery, the quotations being 6 pence higher per 280 pounds for Bristol, Plymouth, and Hull, 9 pence higher for Liverpool, and 1 shilling and 6 pence higher for Glasgow. So far the Glasgow purchases of German flour seem to have been confined to a very few houses. There may have been so much as 1,000 or 1,500 sacks per week reaching this market for some months past.

The average weekly import of United States and Canadian flour into Glasgow the past two years has been about 20,000 sacks, 280 pounds each. For the week ending June 23 they were slightly in

excess of 13,000 sacks. Trade conditions are not such at present as to justify dealers in large purchases of flour, and hence it is impossible to decide now upon the influence German flour will have on this market.

Since its advent under the present arrangement, there has been little activity in the way of new purchases from any source. If the quality prove satisfactory and deliveries can be made in three weeks, as guaranteed, there is much to be feared from this competition.

DELAYS IN SHIPMENTS.

ONE CAUSE THAT MAY BE REMOVED.

In relation to the report of Special Agent M. H. Davis, printed in the issue of July 7, which treated of delays in the transportation by rail and ocean of flour and wheat and suggested cooperation of producers and transportation companies, Mr. A. S. Crane, export freight traffic manager of the Boston and Maine Railroad, which handles large quantities of the products named, writes to the Bureau of Manufactures as follows:

I believe that much of that delay is attributable to the manner in which shippers make their contracts, namely, "Ship's option of clearance from seaboard." Under such an arrangement shippers secure lower rates and the steamer's cargo awaits the option of the boats. * * * It is for the interest of the railroad company that the flour which is discharged to the wharf on arrival be promptly removed by the steamship company, but it frequently occurs that one or more boats sail before the one taking the property, steamers claiming the right to leave the flour when for their convenience and profit to do so, as they have made a special ocean rate in consideration of "Steamer's option from seaboard," and the consideration to the shipper giving the steamship company that option is the low ocean rate.

In this particular feature of shipments the remedy would seem to rest with the shipper.

IRRIGATION FOR CHILE.

ARTESIAN WELLS PROPOSED TO SUPPLY WATER IN THE NORTH.

Consul Alfred A. Winslow, of Valparaiso, reports that the Government of Chile is giving the water-supply question for the arid regions in the northern part of Chile considerable attention, adding:

The Government now has a project under consideration to see what can be done by way of irrigation by means of artesian wells in that region. It is recognized that all those barren plains need to make them the garden spots of the world is moisture. For that reason soundings are to be made in that part of the country to determine what the subterranean supply may be.

Julio Duplaquet, a Government engineer, has been designated by the minister of public works to first make investigations in the vicinity of Copiápo, where it is also proposed to supply the city with artesian water. Copiápo is a city of about 12,000 inhabitants, and is situated in the arid regions about 350 miles north of Valparaiso. Rain has not fallen in that part of Chile for ages, and the few streams in that part of the country are fed by the melting snow on the west slopes of the Andes. The geological formation indicates that there must be subterranean streams flowing from the same source to the Pacific Ocean.

WATER POWER.

GERMANY.

HOW DEVELOPED AND CONTROLLED—LAWS OF THE SEVERAL STATES.

In response to a request for a report on the development, control, and use of water power in Germany, Consul-General A. M. Thackara forwarded the following, his statements being arranged in the order of interrogatories propounded:

Question 1. The laws of Germany relating to the development and use of water power?

Water rights in Germany are not regulated by Imperial legislation; neither do the use and development of water power come within the scope of the Imperial Government. At the formation of the German Empire the right of eminent domain over the public water was reserved exclusively to the sovereign States joining the Empire and now composing the same.

The laws governing water rights enacted by the several States and the various governmental decrees, rules, and ordinances which were the law of the land at the time the Empire was founded remained in full force and effect and subject only to changes and amendments by the several States themselves.

In the contemplation of the German law, from time immemorial the public waters—that is, the rivers navigable by nature, the seashores, and the sea ports—are the property of the State, as a part of its sovereignty for common use. The right of usage of these waters may be acquired by private persons, communities, or municipalities from the State government for certain purposes, subject to governmental supervision and control.

The uniform policy of the German States heretofore has been not to exercise governmental control or ownership by reason of eminent domain over the public waters, so as to make them a source of fiscal revenue, as, for instance, by the erection and management of water works for the supply of water or by the construction of works for the development and use of the water power, etc.

On the adoption of the new civil code for Germany in 1900, establishing a uniform private law in all the German States, the existing laws relating to the water rights in the various States were left unchanged, and legislation regarding water rights and the use of public waters was again specifically reserved to the several States.

Articles 65 and 66 of the Introduction Law (Einführungs-Gesetz) to the Civil Code provide that: "The provisions of the several State laws governing the water rights, inclusive of the mill rights, accesses to the banks of rivers, rafting, the promotion of irrigation and drainage of real property, right of landing places, the formation of islands in the rivers, the river beds, dams, and embankments shall remain unaffected."

RUSSIAN LAWS ON THE SUBJECT.

As to Prussia, the principal State of the German Empire, the following laws relating to water rights are now in force:

1. General State law (Allgemeines Landrecht) Vol. I, sec. 8, par. 96 to 131. Sec. 9, par. 223-274, also Vol. II. Sec. 15, par. 38 to 72 and par. 229 to 246.

2. Law of November 15, 1811, concerning storage of water at mills and the regulation of the natural flow of waters.

3. Law of February 28, 1843, relating to the use of private waters.

4. Law of January 23, 1846, concerning the proceedings in appropriation of land for irrigation plants.

5. Law of January 23, 1848, regarding the construction of river dams.

6. Law of May 11, 1853, relating to the formation of water associations for irrigation plants, the introduction of the third section of the law of February 28, 1843, into the Hohenzollern districts, and the application of the law of November 15, 1811, to subterranean water courses.

7. Decree of November 14, 1853, concerning general provisions for future statutes relating to dykes.

8. Law of April 1, 1879, regarding the formation of water associations.

9. Law of August 20, 1883, defining the rights of the river commission with regard to the riparian owners.

Besides the general laws above mentioned, relating to the whole Kingdom of Prussia, there are also a number of special laws of a local nature in force in

the separate provinces and districts and also particular laws in those parts of the Kingdom formerly governed by the French and the common law.

It would be impracticable in the bounds of a consular report to give the various laws, decrees, ordinances, etc., relating to water power now in force.

OWNERSHIP AND CONTROL.

2. Whether or not the German Government develops the water power under Government ownership and control and rents and sells the power for use of manufacturers, millers, etc., or whether or not the powers are developed by private capital and the power rented or sold exclusively for the benefit of private owners?

Up to the present time, with a few exceptions, the governments of the several German States do not develop the water power under government ownership, nor do they control and rent and sell the power for the use of manufacturers, millers, etc., neither is the power all developed by private capital and the power rented and sold exclusively for the benefit of private owners.

Only during the past twenty years has the utilization of the water power of Germany by the several States under government ownership been taken into consideration. The question is also being agitated by private parties so as to bring about a cooperation between them and the public authorities.

In Prussia at the present time, government ownership of waterworks for power and other purposes is being seriously considered. An exhaustive report presenting the ways of utilizing the public waters as a means of fiscal revenue has been prepared by the ministry of public works, the department of the government which has supervision over all matters pertaining to the public and private waters, and recommending that proper legislation to that end be enacted by the Prussian Parliament. Action, however, on this project is being deferred.

The Bavarian Government proposes to take up the matter of governmental ownership of the waters in the province of Upper Bavaria. A bill for the purpose has been drafted and it is thought that legislation to that effect will soon be enacted. The purpose in view is to establish water works for the generation of electricity from which to furnish the power to run the railroads in South Bavaria.

Baden has taken the lead in exercising governmental ownership of water power by the erection and management under governmental control of the small electric water-power works at the port of Kehl, on the Rhine, to supply the railroad stations and the navigation works of the said port with electricity.

The waterworks of the city of Nordhausen, in the Harz Mountains, are an illustration of municipal ownership of water-power works.

PROVISIONS FOR THE USE OF WATER.

The system hitherto universally prevailing in the German States for the use of the water is that the erection and management of waterworks are carried out by the water associations known by the German name of "Wasser-Genossenschaften." These are quasi public corporations, organized under the special laws mentioned above, under the enumeration of the laws of Prussia relating to water rights and water power.

These semiofficial corporations are organized either entirely by private owners of land who are being directly or remotely benefited by the use of the waters, or municipalities, or by a combination of both municipality and private individuals.

It is a special feature of the laws governing water associations that the membership of all persons is legally made compulsory whose real property is held to be benefited by the purposes and the object of the association, whether it be by the reason of a supply of drinking water or of furnishing power or of drainage or irrigation or of other ameliorations.

The right of appropriation of private property on the assessment of damages is also an essential feature of the said laws.

These associations being corporations for profit, are also being organized under the general German law of the "Code of Commerce" governing companies with a limited liability.

A leading illustration of these latter corporations is one in which the city of Aix la Chapelle is the principal stockholder. This company is called the

"Ruhrthal Sperrengesellschaft G. m. b. H."—a limited liability company. It is named after the river Ruhr, near which the city is situated. It was organized on March 20, 1890, with seven incorporators, composed of the mayor of the city of Aix la Chapelle as the representative of the city by virtue of a resolution passed by the city council, a commissioner (landrat) of the county of Aix la Chapelle (landkreis of Aachen), empowered by resolution of the county commissioners and of five commissioners representing and empowered by five other adjoining counties or "landkreise."

This company, the title of which, "Ruhrthal Sperrengesellschaft," means company for the storage of the waters of the river Ruhr, was organized with a capital of 5,000,000 marks (\$1,190,000), to which the city of Aix la Chapelle, the county of Aix la Chapelle, and two other counties subscribed 1,000,000 marks (\$238,000) each, two counties subscribed 320,000 marks (\$76,160) each, and one county 360,000 marks (\$85,680).

The object of the company, as stated in the articles of corporation, is as follows: The erection and maintenance of reservoirs (sammelbecken) for the river Ruhr and its tributaries for the purpose of improving the condition of the said river courses, and to better utilize the water and the water power by the erection of aqueducts, by drainage and irrigation, and also by the construction of electricity works, water motors, pumping works, and the transmission of power for farming, for the industries and for small trades, in a manner so as to be of common benefit.

It is one of the duties of the said company to offer the power produced to the parties in interest, especially to the city of Aix la Chapelle, at rates in proportion to the amount of the capital invested by fixing the prices upon an equitable basis.

CHARGES FOR USE OF POWER.

3. The charges for power so rented or sold either by the State or private owners.

The above-mentioned Ruhrthal Sperrengesellschaft charges its four membership customers: (1) City of Aix la Chapelle; (2) county of Aix la Chapelle; (3) county of Düren, for electric light 4.1 pfennig (0.976 cents), and (4) the county of Schleide 3.7 pfennig (0.88 cents) for the kilowatt hour, and a further reduction of 10 per cent if the dividend of the company exceeds 5 per cent; but it is a condition that an annual consumption of between 2.3 and 8.5 million kilowatt hours must be guaranteed and paid for.

These membership customers are restricted in their sales to others to a tariff, imposed by the management of the company, by which a charge of between 25 and 40 pfennig (5.95 to 9.52 cents) for the kilowatt hour is made.

Electricity for power purposes is sold: (1) At low pressure from 8 to 35 pfennig (1.9 to 8.33 cents); (2) at high pressure (5,000 volts) at 4½ to 25 pfennig (1.07 to 5.95 cents) according to annual consumption.

A more uniform consumption is given a better rate; for instance, a consumer using 10 horsepower in twenty-four hours is given a better rate than one using 24 horsepower in ten hours.

(2) The Valley Storage Waterpower Works of the city of Solingen, built in 1903, charges for light 45 pfennig (10.71 cents) per kilowatt hour, on a consumption up to 350 hours a year; above that, 25 pfennig (5.95 cents) a kilowatt hour; for power, 18 pfennig (4.28 cents) per kilowatt hour, on a consumption of 750 hours a year; exceeding 750 hours, 8 pfennig (1.9 cents) per kilowatt hour.

These works have a capacity of 450 kilowatt hours. In the spring of 1904, one year after construction, they were connected with 140 motors with a consumption of 209 kilowatts and had a lighting capacity of about 6,550 incandescent lamps of 16 candle light each. During the year 1904 the total output for light and power amounted to 278,000 kilowatt hours and in 1905 to 388,800 kilowatt hours, an increase in one year equal to 40 per cent.

In the spring of 1906 they were connected with more than 500 small motors.

(3) The charge of the Ennepethalsperre for electrical energy is 20 pfennig (4.76 cents) for the kilowatt hour for power, and 35 pfennig (8.33 cents) for light, much lower than the rates of the largest cities of the neighborhood.

This plant was put into operation in 1905 and has a yearly capacity of 1.9 millions of horsepower hours.

According to the statutes of the company the proportion of the general expenses which each member using the power has to bear is determined in the following manner: For each horsepower of the motor a rate of 30 marks

(\$7.14) is charged yearly for the daily use of the motor, in addition to which a gross sum is paid yearly, according to the size of the motors, as follows:

Horsepower.	Marks.	Dollars.
Up to 5.....	30	7.14
From 5 to 10.....	40	9.52
From 10 to 15.....	50	11.90
From 15 to 20.....	60	14.28
From 20 to 30.....	80	19.04
From 30 to 50.....	100	23.80
Above 50.....	120	28.56

HORSE AND STEAM POWER COMPARED.

4. The water horsepower in use as compared with the steam horsepower?

On April 1, 1905, Germany had 375 public electricity works with an aggregate capacity of about 107,800 horsepower, the greater part of which was generated by water power.

According to the industrial census of 1895, the aggregate capacity of all motors in use in the industries was 3,428,000 horsepower. Of this, 79.4 per cent was furnished by steam power and 18.4 per cent, or 629,000 horsepower, by water; both together were 97.8 per cent of all the power used by the factories in Germany.

In Prussia in the year 1898 there were in operation 19,567 water-power works with a total capacity of 219,500 horsepower, the average capacity being 11.2 horsepower.

According to the statistics, the capacity of all steam engines in use in Prussia April 1, 1905, with the exception of railway locomotives and engines used by the army and navy, was 5,440,000 horsepower.

5. Uses to which the water power is applied?

Water power in Germany is mostly applied to the generation of electricity for lighting and industrial purposes. It is also used for pumping water into reservoirs for supplying cities with water and for irrigation and for drainage. As an illustration of the uses of water power for the generation of electricity for industrial purposes, the following statement relating to the waterworks of the Wupperthal Sperren Genossenschaft, erected in the region of the source of the river Wupper, emptying into the Rhine, may be of interest:

Electric power is furnished by the company to the following plants, viz, 5 powder mills with 16 motors, 1 bone mill with 1 motor, 9 grain mills with 10 motors, 15 cloth factories with 14 motors, 7 spinning works with 5 motors, 3 hammer works with 13 motors, 6 electricity plants with 7 motors, 64 printing works, dyeing works, bleaching works, weaving works, etc., with 9 motors, 4 wire-thread works with 3 motors, 1 flat-iron factory with 1 motor, 4 paper factories with 6 motors, 19 grinding works with 27 motors, 1 felt factory with 2 motors, 1 woodenware factory with 2 motors, 1 waterworks and electric works with 3 motors, 2 hinge and metal screw factories with 6 motors.

CANADA.

PLANS FOR EXTENSIVE CANAL BUILDING FOR GREAT WHEAT TRAFFIC.

Consul H. D. Van Sant advises that the proposal of the Canadian government to construct a new 25-foot Welland Canal at a cost of \$25,000,000 to \$30,000,000 meets with strong indorsement in the Kingston district. The consul continues:

The new canal would mean a vast increase in the transshipping at this port. With the larger locks and the deeper channel of the new canal many of the large vessels on the upper lakes which now transship at Buffalo would come on through to the foot of the lakes at Kingston. The draft of these vessels would be too great to permit them going down the St. Lawrence to Montreal, so that most of them

would transship at Kingston, the end of the lakes. With this increase to its local trade, the expansion would be marked and Kingston would soon resume its place as one of the commercial centers of Canada, for which it was selected by Frontenac when he first landed here in 1682.

The present Welland Canal will not allow a steamer to carry more than from 60,000 to 75,000 bushels of wheat, the result being that the steamers going through the Welland Canal now are only about one-fifth the size of the big steamers that carry grain to Buffalo from the West and Northwest.

It takes about seven days to make the trip from Chicago and Fort William to Buffalo and return, exclusive of the time taken to discharge the cargo. Twenty-four hours longer would take this steamer from the foot of Lake Erie to Kingston via the Welland Canal. It is claimed the deepening of the Welland Canal and bringing the grain to Kingston for transshipment would mean a saving of not less than $2\frac{1}{2}$ cents per bushel, making the total cost of the grain delivered to Montreal $2\frac{1}{2}$ cents a bushel, a total saving of about 3 cents a bushel from Fort William.

CONSTRUCTION COST AND SAVING EFFECTED.

On the other hand, the advocates of the new Georgian Bay and Ottawa River Canal claim that this route would open up a distinctly larger field for Canadian development, besides being a shorter route to Montreal. This route from the mouth of the French River on Georgian Bay to Montreal via the Ottawa, Mattawa, and French rivers is 440 miles. Of this about 400 miles is river and lake waterway, with but 30 miles of actual canal to be built. The estimated cost by the Lake St. Louis and Saint Anne de Bellevue entrance for a 22-foot channel is \$100,000,000. The Riviere des Prairies entrance would cost \$6,000,000 less. The engineers estimate that the canal would be open for traffic for 200 days in the year.

Yet from the Kingston view point the building of the deeper Welland Canal would compare favorably with the more northern Georgian Bay route. The St. Lawrence route would be longer, but there is more open deep water to Kingston and much less canal digging and cost. Based on a crop of 100,000,000 bushels of grain the Welland route would mean a reduction in grain rates of \$6,000,000.

This information is embodied in the views of a number of the leading grain transporters of Kingston, who claim that instead of three grain elevators at Kingston, the deepening of the Welland Canal would at once mean six or eight additional ones of even larger capacity.

AMERICAN ADVANTAGES.

On account of geographical position and shorter distance to the Atlantic as well as more temperate climatic conditions, the building of the Welland Canal at a cost of \$30,000,000 or the Georgian Bay Canal at a cost of \$100,000,000 will not overcome finally or fully the advantages of waterways building or proposed to be built in the United States.

The enlargement of the Erie Canal from Buffalo through New York State, or the building of the new canal from Montreal through the Lake Champlain district to the Atlantic, or the larger project for the deepening of the Mississippi and connecting waterways from

the northwest to New Orleans, means the continued supremacy of American lake and canal trade. These American waterways, when completed, will for some time to come more than offset the advantages of the longer and more dangerous St. Lawrence route, beset with narrow channels and rocky shoals and swift currents, late and thick fogs and ice blockades, and the short and dangerous season across the Newfoundland banks, not as safe as either of the proposed American routes till after June 1, at least.

If, however, either the Welland Canal is enlarged or the Georgian Bay route becomes a certainty it means a very large addition to the Canadian carrying trade through its own territory to Montreal and a considerable increase in the trade through the lower St. Lawrence.

RAW COTTON IN EUROPE.

ACTION BY PARIS CONVENTION—AMERICAN BALING.

Mr. J. R. MacColl, who presided over the International Cotton Congress held last year at Atlanta, attended the cotton congress recently held at Paris, and in a conversation with a representative of the London Financial Times is reported as follows in the issue of that journal for July 8:

The Paris congress took an important step in indorsing the buying of cotton on net weight. The purpose is to further the movement for a decent American bale similar to the Egyptian bale; I am glad to say that since spinners and growers have come into closer relations active efforts are being made throughout the Southern States to introduce new methods of compressing and covering cotton. Continually we hear of new types of compresses being invented, and I anticipate that in the next decade there will be abundant evidence afforded that the American bale of the future is to be in keeping with the business enterprise and energy of the American nation.

THE EXPERIMENTAL PLANTATION PROJECT.

It is, in my opinion, unfortunate that an experimental plantation scheme was abandoned by the English spinners. It was a mistake to attempt to form a foreign corporation. The company should be incorporated under American laws, and include prominent American spinners and planters, although the majority of the stock might be owned in Europe. I do not believe that the leaders of the growing associations would have any objection to such a company. They recognize the important advantages that would accrue from looking more closely to the producers and consumers in a common effort to increase the volume and efficiency of cotton growing in America. Our European friends frankly admit that cotton production in new countries is more likely to benefit their grandchildren than themselves or their sons, and if they are for years to be dependent on our Southern States for their raw material, the simple investment necessary to carry on experimental plantation work is as nothing compared to the benefits that may be derived from it. I find widespread difference of opinion with regard to the value of trading in futures on the cotton exchanges. Some of the best and most influential spinners in every country affirm that industry would be much better without it. The conservative and responsible members of the exchanges should, in my opinion, cooperate with the growers and spinners in removing as far as possible the objectionable features of future trading, and thus prevent the increasing protest against the injurious influence upon the industry of so-called gambling and speculation.

CONSUL-GENERAL JAMES L. RODGERS, writing from Habana, says that the Cuban imports of dry glue in the fiscal year 1906 amounted to 410,294 pounds, of which the United States furnished 194,713 pounds, Germany 114,081 pounds, and France 42,909 pounds. The glue is used in the wood-working trades, from which there is an increasing demand.

MUNICIPAL OWNERSHIP.**UNITED KINGDOM.****MANAGEMENT OF THE VARIOUS PUBLIC UTILITIES OF BIRMINGHAM.**

The operation of the various public utilities under municipal management in the English city of Birmingham is reported upon as follows by Consul Albert Halstead, the statistics being for the year ended March 31 last:

The gas department contributed \$298,378 toward the reduction of taxation, an increase of \$18,245 over the previous year. Besides this, \$166,872 of profit were assigned to the sinking fund. The increased profit is noteworthy, as the expenditure for coal was \$351,459 greater. The sale of gas showed an increase of \$146,642, while that of residual products brought \$214,666 more, the increase from the sale of coke alone being \$173,199.

STREET RAILWAYS AND ELECTRICITY.

The first full year of the management of the street railways by the city showed a total profit of \$589,396. After providing for certain obligations there remained a net profit of \$350,570. Of this \$180,242 was placed in the reserve fund, making that fund \$311,523, the balance being applied to the reduction of taxation. The capital expended in reconstructing the street-car lines, electrifying, and purchasing new cars was \$4,615,520. The average fare per passenger was 1.8 cents, the average cost of carrying a passenger was 1.5 cents, and the average number of passengers per car mile was 12.57.

The electric supply department, which, in addition to selling electric light and power, furnishes the street-railway department with its motive power, had a profit of \$296,501, of which \$121,074 was applied to the redemption of debt and the balance to meet interest charges. This undertaking is still in the process of development, and capital charges continue.

WATERWORKS' DEFICIT—EARNINGS OF THE CITY DEPARTMENTS.

The water department is not as profitable an undertaking. Some years ago the city found it necessary to increase its water supply, and it was deemed advisable to go to Wales for the water. The cost of this improvement was greater than anticipated, and while the city has an excellent supply of the purest water, the undertaking is still a charge on the taxpayers. The deficit, after paying working charges and interest for the year, was \$398,766, or \$17,880 less than last year—an improvement. To meet this deficit \$316,323 will be paid out of the city revenue, which revenue comes from taxation and from the profit of the gas, street railways, and certain small city undertakings and \$82,443 will be charged to capital account under the authority granted when Parliament authorized the construction of new waterworks.

The total contributions of the gas and street railway departments to Birmingham's taxes were \$468,710. As \$316,323 deficit of the water department must be paid out of the city revenue, the actual profit to the city from the four great undertakings—gas, water, electricity, and street railways—was \$152,388. If the \$82,443 remaining of the water department deficit had been met out of the revenue, the actual profit on these four undertakings would have been \$69,940.

GLASGOW STREET RAILWAYS.

SUCCESSFUL OPERATION OF THE MUNICIPAL ELECTRIC LINES.

Consul J. N. McCunn, of Glasgow, reports that the official details of the operations of the municipal street railways of that Scotch city for the year ended May 31 show gratifying results, and gives the following particulars:

The number of passengers carried was 226,948,290, an increase of 2,885,192 over the previous year. The revenue from passenger fares reached the record figure of \$4,416,321, an increase of \$97,883 over the previous year's total. While the total receipts for the year are the highest yet recorded, the increase is the smallest in the past ten years. In 1901-2 the increase of receipts over the previous year reached the extraordinary sum of \$608,040. This remarkable increase was accounted for by the fact that at that time the great extension scheme was being rapidly utilized, and the receipts were proportionately increased. The total receipts, however, of that year (1901-2) were only \$2,990,041, so that the revenue has increased in six years \$1,426,281, or about 50 per cent. The comparatively short extensions to the track mileage made during the past year and the inclemency of the weather during the summer and autumn seasons are the attributed causes for the lower rate of increase.

The average track mileage (single) open during the year was 179 miles, an increase of 10 miles. The rates of fare charged ranged in regular gradations from 1 to 8 cents, over 60 per cent of the traffic being carried at the 2-cent rate.

AUSTRIA.

CONTROL OF PUBLIC SERVICES ASSUMED BY THE CITY OF REICHENBERG.

Vice-Consul Edward T. Heyn, of Reichenberg, states that the public utilities of that city are owned and operated by the municipality, with the exception of the gas works and the telephone. The gas works are conducted by a private company, while the telephone is under the control of the Austrian postal department. Mr. Heyn continues:

In 1896 the Austrian minister of railroads granted a privilege to the city of Reichenberg for the construction of a local electric street-car line, and also one to the neighboring city of Roehlitz. Not wishing to construct these lines, the city granted a franchise to a private company to build and operate them. In 1905 the city resolved to buy up the stock of the private company and operate the roads. Under the management of the company the street-car line never paid a dividend, and the interest on the borrowed capital was too high for the income. Since assuming control of the lines the city has operated them with an important reduction of capital.

The original franchise granted to the street-car company provided not only for the operation of a subway line, but also for the establishment of an electric power and lighting plant. The company refused to make use of this right unless it received a monopoly until 1947, the free use of water from the city waterworks, and to be allowed to charge private persons 14 cents per kilowatt for lighting purposes

and 6 cents for power. The company was not willing to reduce the price for lighting until after five years, and only then if its net profits amounted to 8 per cent. These privileges the city refused to grant, deeming them burdensome, and this resulted in the purchase and operation by the municipality of the street-car system and electric lighting and power plant of the company.

In 1901 the city decided to build waterworks, and purchased six springs on the highest mountain in the vicinity. The waterworks cost \$345,000 and have an output of 18.21 gallons of water per second. The city makes a charge of 10 per cent on all rents for water purposes.

Although the gas works are under private management, according to the agreement between the company and the city the latter, at the end of fifteen years, is entitled to assume control of the gas works on the payment of a stipulated price. This period expires on July 1, 1909, and the city has decided to purchase the works at that time and operate them thereafter.

ARGENTINA.

BIDS FOR UNDERGROUND RAILWAYS TO BE BUILT BY BUENOS AIRES.

Consul-General Alban G. Snyder writes that bids for the construction and exploitation of two of the underground railways projected by the municipality of Buenos Aires were opened on May 11. Only one bid for the construction was received and none for the exploitation.

The bid received contained three alternative proposals, as follows: (1) Double line, 1.67 meters gage (meter = 39.37 inches), tunnel faced with masonry, \$18,520,598 gold; (2) same, gage 1.44 meters, masonry facing and cast-iron rings where necessary, \$17,529,928 gold; (3) gage 1.44 meters, masonry facing, \$16,412,045 gold. The land must be given by the municipality, as well as a place for dumping the earth excavated and the use of the public ways for service trains. Exemption from national, municipal, and provincial taxes is also demanded.

Except in case of circumstances beyond control, the lines, workshops, and power houses are to be finished in three and one-half years, and a proposal is made to fix a bonus of \$10,000 a week for each week cut from the time stated for its completion and an equal amount as a penalty for delay. The guarantee deposit is to be returned one year after the delivery of the work.

From the conditions imposed by the bidders it is quite possible that this proposition will not be accepted, and other measures will probably be taken looking to the securing of this work, so much needed at this time.

Renewed Life in Canadian Shipping.

Consul F. D. Hale, of Charlottetown, notes from a recently issued Canadian blue book that the decline in the Dominion's shipping tonnage, which has been in progress for thirty years, has now been apparently arrested. Although 452 vessels were stricken from the registry list in 1907, there was a net gain; 392 new vessels, valued at \$1,728,450, were built and others bought from abroad. The total value of Canadian vessels last year was \$20,960,640.

METAL BEDS IN BRAZIL.

A PROMISING MARKET AFFORDED PRODUCTS OF THE UNITED STATES.

In spite of the high duty charged upon metal beds entering Brazil, Consul-General George E. Anderson, of Rio de Janeiro, is satisfied that there is a good trade possible in that country for American metal-bed manufacturers. This leads him to write:

Somewhat of a "national industry" has been developed in the manufacture of iron beds in Brazil, but the vast mass of the people still use beds of wood without springs. The beds manufactured in Brazil at present are largely of two types. One is of cast-iron ends and sides, upon which a spring mattress on a wooden frame is placed. The other is combined of wooden frame and ends of piping, generally made so that the ends will fold under the body of the bed for moving purposes.

Brass beds are rare and are imported by foreigners for their own use. Ornamental metal beds of any sort are comparatively rare. The factories where beds of Brazilian make are produced are usually small shops, and, being largely the product of hand work, the beds are very expensive.

A cast-iron bed with springs sells at the factory, which generally retails them, at about \$30 gold. A single bed of wood and iron piping, with springs attached, retails in the same way for \$10.50. While much heavier, it corresponds in quality and use to single beds sold complete in retail stores in New York for \$1.50. On the same scale of prices, beds of the sort sold in the United States by mail-order houses for \$1.50 ought to sell here for eight times that amount.

IMPORT DUTIES—SUITABLE STYLES.

The only reason the local factories can sell beds at the prices they charge is in the import duty on beds. It is impossible to give a comprehensive statement as to the tariff, for the rate varies on the different sizes of beds, upon the weight, the character, and the value. In iron beds the tariff runs from about \$2 on a small child's bed to about \$12 on a double bed coming under the class of "decorated." In brass beds the rate of duty runs from \$9.30 for a simple child's bed to \$42.50 for a double bed "decorated," brass beds here being classed as "copper" beds. Into which particular class any particular bed would come could be told, generally, only by importing one. Some beds are imported, mostly from England at present, and the amount is increasing. In the customs returns metal beds are included with all other metal furniture.

In general, Brazilian buyers prefer furniture of the sort represented by lighter and more fanciful metal beds made in the United States. Value and price being equal, it is probable that lighter beds would not only be more popular here, where furniture runs to the French in style, but also would come in at a lower customs rating. While there ought to be a good business done here in standard designs of beds of low value, the more profitable business at first is likely to be in high-grade goods.

Nothing in this line can be done except by direct representation. A traveling man from the United States making one thorough canvass of the field would probably be able to establish connections which would mean an increasing volume of business for years. In

the trade generally the same conditions obtain as in other lines. Credits should be liberal, though they may be amply covered by prices charged. Prices in general should be quoted f. o. b. New York or other American port, leaving customs matters to be attended to by the importer. This is much the more satisfactory way to American exporters and is the customary way in Brazil.

TRADE OF NATAL.

FOR THE FIRST TIME THE EXPORTS EXCEED THE IMPORTS.

Vice-Consul Alphyon P. Richards, of Durban, in reviewing the trade of the colony of Natal during the first quarter of this year, says that it was healthier than in the first three months of 1907, his report continuing:

Business to-day is more active and there is heavier buying in many of the most important branches of commerce. The sum total of imports, including gold and specie, into Natal was less in the quarter ending March 31, 1908, than in the corresponding period of 1907, and the deficit was less than 3 per cent. On the other hand, exports, including gold and specie, increased by nearly 4.5 per cent. It is noteworthy also that in the quarter January to March, 1908, for the first time in the history of Natal the exports were greater in value than the imports. The total imports in the period under review amounted to \$12,623,010 and the exports were valued at \$12,625,385. A further striking fact is that the exports of purely colonial products increased from \$3,807,569 in the first quarter of 1907 to \$4,999,609 in the first quarter of this year—an advance of 31.3 per cent. This result demonstrates the effectiveness of the effort which is being made to foster colonial industries. The actual state of trade in Natal is not discouraging. Lack of confidence, which is apparent here, is more the outcome of previous depression than the result of existing business conditions. The volume of trade in comparison with the population of the colony is large, and the fact that this year opened more auspiciously than its predecessor is evidence of the progressive tendency of local business.

VARIATIONS IN IMPORTS AND EXPORTS.

The articles of import which showed an increase the first quarter of this year over the first quarter of 1907 are cotton manufactures, maize, grain, flour, rice, wood and woollen manufactures; while the following showed a decrease: Fodder and forage, furniture, haberdashery, millinery, hardware, cutlery, iron and iron manufactures, machinery, petroleum, tobacco, bicycles and tricycles, and motor vehicles.

Following are the values of exports from Natal, showing substantial gains for the first quarter of 1908 over the corresponding period of 1907:

Articles.	1907.	1908.	Articles.	1907.	1908.
Bark	\$144,759	\$116,718	Angora hair	\$38,465	\$56,128
Coal	710,489	1,093,503	Hides and skins	176,206	156,307
Maize	46,490	374,235	Matches	83,086	107,535
Sugar	500,116	766,756	Soap	73,080	120,110
Tea	87,037	135,328	Wool	1,303,000	1,211,802

FOREIGN TRADE OPPORTUNITIES.

[Inquiries in which addresses are omitted are on file at Bureau of Manufactures. In applying for addresses refer to file number.]

Consuls are requested to contribute to this department.

- No. 2483. Panama Canal supplies.**—Bids will be received until August 17, 1908, by the Isthmian Canal Commission, Washington, D. C., for the supply of shop machines, pumps, jacks, repair parts for steam shovels and dump cars, truck springs, chain, twist drills, teamers, taps, milling cutters, drill chucks, saw blades, carborundum wheels, etc. (Circular No. 457.)
- No. 2484. Beet-sugar machinery.**—An American consul in South Africa reports that a company is being organized in that region for the purpose of establishing a factory for the manufacture of sugar from the beet. The promoter of the plan has requested the consul to furnish him the names of firms from which he can secure plans, specifications, and quotations for the necessary machinery for a mill capable of treating 300 tons of beets per day and the time it would take from the date of receiving an order to have the same erected. Firms desiring to bid on this plant can send the information to the consulate in question, and it will be forwarded to the proper person.
- No. 2485. Leather of all kinds.**—The Bureau of Manufactures is in receipt of a letter from a British firm stating that it is greatly interested in the sale of all kinds of chrome leathers, principally box calf, kipsbox, box hides, glace kid, chevreaux and chrome kid leathers of all kinds, and would like to communicate with firms producing these leathers in large quantities, with a view to purchasing the same. Full particulars regarding quantities, quality, price, delivery, etc., are desired by the firm.
- No. 2486. Hospital clothing and equipment.**—Vice-Consul-General F. M. Endicott, of Cairo, Egypt, has forwarded copies of specifications issued by the Egyptian Ministry of the Interior for the supply of hospital clothing and equipment, necessary for the Department of Public Health, Cairo, for the year 1909; also a form to be used for the foregoing tenders. Time for submitting bids expires August 20, 1908.
- No. 2487. Outfit for canning pineapples.**—A New York engineering firm advises the Bureau of Manufactures that it has an inquiry from a client in Cuba for prices on a complete outfit for canning pineapples. The firm understands that they want cookers or steamers, machines for cutting up the fruit and for canning, soldering, etc. Full particulars are requested from firms in a position to supply the necessary equipment.
- No. 2488. Petroleum coke.**—A report has been received from an American consular officer in an European country in which he states that a local importer of various minerals and metals has requested him to obtain the names of American producers or exporters of petroleum coke, for which he has a buyer who is willing to contract for 2,000 or 3,000 tons of this article. Interested firms should correspond direct with the importer, whose name is given in the report.
- No. 2489. Representation in Turkey.**—An American business house writes that one of its best customers in Turkey would like to act as representative for any American firms which desire to secure a market in that region for their goods. He is also willing to act as purchasing agent for local goods.
- No. 2490. Railway equipment.**—An American consul in South Africa reports that the government railways in his district invite bids for the supply of 125 high-sided 8-wheeled bogie wagons, and American manufacturers should find it to their interest to attempt to secure the contract. The consul has forwarded plans and specifications referring to a previous order for 50 wagons, but they are identical with the requirements for the 125 wagons now wanted, and if 125 is substituted for the figure 50 in the specifications the particulars will be found correct. These specifications and the name of the official to whom bids should be sent can be obtained from the Bureau of Manufactures.
- No. 2491. Machinery and supplies.**—The Monitorul Oficial of Bucharest, Roumania, in a recent issue publishes the grant of privileges under the Industrial Law for the duty-free importation of machinery, etc., as follows: To the mechanical engineering shops which N. Vasiliu proposes to establish at Bucharest; to Dinerman & Wechsler's sawmill at Darmanesti, Bacau; to Lack, Blan & Co.'s woodworking establishment at Bucharest, and to the Societate de Tricotaje "Filaret" (hosiery factory) at Bucharest.

MEXICAN STEEL-RAIL TRADE.

GOVERNMENT RAILWAYS PLACE AN ORDER WITH HOME MILLS.

Consul-General Benjamin H. Ridgely writes from Mexico City as follows on the steel-rail trade of Mexico:

One of the first material and somewhat startling results of the change in the Mexican tariff on steel and iron, which is to take effect on August 16, is the authoritative announcement that the National Railway Lines of Mexico have placed an order for 20,000 tons of new steel rails with the steel company at Monterey, Mexico. The big steel plant in question is reported to have been very short of profitable work, but this order alone means that it will be kept busy at least two years. It is intimated that the price paid was 60 or 65 pesos Mexican currency (from \$30 to \$32.50 United States gold) per ton. In any event, the placing of the contract has attracted wide attention, and it is recognized that American industry has thus lost an order which, at present United States prices, would have meant about \$560,000.

It is clear that the action of the National Lines in awarding the contract to the Monterey company is in line with the present policy of the Government of protection for home industries.

Not only did the increase in the duties on steel give the National Lines a cause for their action, but the recent merger of the railroads, by which the Government assumes control of the great lines of the country, furnished another valid pretext for awarding the big contract to the Mexican company.

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FOREIGN MOTOR TRADE.

ITALY.

OPENING FOR AMERICAN STEEL MOTOR BOATS.

The following information concerning motor boats in Italy and the probable opening for American steel motor boats in that market is furnished by Consul D. R. Birch, of Genoa:

The motor boat of the future in Italian waters will be of steel construction, and a big business awaits the American maker of steel boats who will meet the demands of the Italian market. This is the information that comes to this consulate as a result of a canvass of the situation in this immediate section of Italy concerning the prospects of selling American motor boats.

At present the trade in them, either Italian or foreign-built, is almost at a standstill. The two manufacturers of this section are building only upon order. These makers express the belief that the Italian market has been fully supplied, perhaps overloaded, and that all those interested in motor boats have either already made their purchases or are awaiting the coming of a type more suitable to local conditions than those now to be seen on the Riviera. This new type, according to the prediction of dealers familiar with the desires of the actual users, is the boat of steel. There is but one steel boat now in use in these waters—an American craft—but the criticism is made that, while otherwise suitable because of its superior strength to resist the often turbulent seas of the Mediterranean, its appearance is not as attractive as it might be.

The foregoing pertains to the pleasure craft, as the boat for power purposes is as yet but little known in Italy. Much business might be done in the line of power boats by the American maker who will give some study to the needs of the Italian market. There are at the present time two barges plying between Genoa and Savona which have been fitted with motor power as auxiliary to sails, and these are reported to be giving satisfaction.

A local motor boat manufacturer, with offices in this city and an extensive plant in Varazze [address on file in the Bureau of Manufactures], solicits correspondence from American firms looking toward the opening of sales of American steel boats, and the manager of this concern is confident that some business could be done in both power and pleasure boats. This factory has constructed many

of the boats now in use on the Mediterranean between Genoa and Marseille, and is at present completing two large passenger motor boats to be placed on the canals of Venice, to compete with gondolas.

LEGHORN.

FINE GARAGE COMPLETED—FINE WATER TRIPS AFFORDED.

Consul Ernest A. Man furnishes the following concerning automobiles and motor boats in Leghorn:

The automobiles owned here are almost exclusively of Italian manufacture. There are no automobile dealers located here, but a company which has recently put up a very fine garage in this city sells machines, and the address of the same herewith given. [Filed in the Bureau of Manufactures.]

While many motor cars are seen in Leghorn, they are as a rule the property of strangers who are merely passing through on a tour of the country, and but few automobiles are owned in this locality, as the roads are not suitable and gasoline is expensive.

Very few motor boats are in use or owned here, in spite of the fact that a fine sea front and attractive points to visit by water as well as favorable weather conditions exist, all of which would seem to encourage the use of motor boats; but it seems that there are no agents for their sale in Leghorn, although two shipbuilding firms here also construct motor boats. Their addresses are given, as they might possibly be purchasers of engines, etc. [Addresses filed in the Bureau of Manufactures.]

One of these builders says that the principal obstacle in the way of the development of the use of motor boats here is the extremely high price of gasoline, viz, 65 centimes (12½ cents) per liter (1.1 quarts), which is virtually prohibitive for the use of these boats for mercantile purposes.

FRANCE.

AMERICAN MOTORS MUST OVERCOME A DISCRIMINATORY TARIFF.

Consul-General Robert P. Skinner, of Marseille, furnishes the following information relative to explosive engines and electric motor boats in France:

Owing to the depression prevailing in the automobile industry in this country, several manufacturers have turned their attention to motor boats, taking a very small profit rather than close their works. This, in connection with the duties imposed upon foreign motors, renders it difficult for American manufacturers to make much headway in France at present.

The tariff upon imported engines is as follows: Weighing 250 kilos (551 pounds) or more, \$3.47 per 100 kilos (220 pounds), if imported from the United States, but only \$2.31 if imported from minimum tariff countries; weighing less than 250 kilos, \$5.79 per 220 pounds, if imported from the United States, but only \$3.86 if imported from minimum tariff countries.

Until recently there has been a widespread demand for low-priced gas engines, but at present electric power is supplied at the rate of 1.06 cents per kilowatt hour for industrial purposes, and as the current is distributed throughout the city and is becoming more generally available throughout the south of France, the present demand

is for electric motors of every type, and particularly small ones, commanding a price of \$50 and thereabouts. Bearing in mind that American motors are dutiable at the highest rate, the scale of tariff duties is as follows, per 220 pounds:

Description.	Maximum.	Minimum.
Dynamo-electric machines, weighing 2,204 pounds and above	\$5.79	\$2.50-3.86
Same, weighing from 110 to 2,204 pounds	8.68	5.79
Same, weighing from 22 to 110 pounds	23.16	15.44
Same, weighing less than 22 pounds	28.95	19.30-21.23

If American manufacturers can overcome these discriminatory tariff charges, they will find in this region an excellent market for electrical machinery, and one which tends to increase from month to month. No apparent effort is being made, however, to dispose of American devices; no traveling representatives of our great companies are seen here; and only desultory efforts to build up trade by means of correspondence are heard of. The reputation of the United States, under the head of electric machinery, has been created and maintained in France chiefly by French branches of American concerns, who manufacture and sell their wares in this country, employing American ideas without any corresponding benefit to American labor.

A few useful addresses are forwarded, for possible correspondence, of builders and buyers of motor boats and dealers in electric motors. [List on file in the Bureau of Manufactures.]

AGENCIES ADVISED BY HAVRE CONSULATE.

Writing from Havre, Consul A. Gaulin says that American manufacturers could find a better outlet for marine motors in France if they entered the field on the same footing and exploited the markets in the way their French, English, German, and Italian competitors, who are constantly sending representatives and salesmen to visit the trade, solicit orders and supply demands. In a word, it would be necessary to have an agency in this country from which orders could not only be supplied promptly, but where the motors could be seen and their merits demonstrated.

GERMANY.

AUTOMOBILES AND MOTOR BOATS IN Breslau.

Consul Herman L. Spahr furnishes the following information concerning the probable market in Breslau for American automobiles and motor boats:

Breslau ought to be as good a field for the sale of American automobiles as other German cities. Among its half a million people there is a large wealthy class. The streets, wide enough for traffic, are well paved, and excellent roads radiate in all directions. There is strong competition, however, and success will depend on prices and methods. In addition to the pleasure cars, a number of taximeter automobiles are in use and many business wagons.

Besides the police boat, there are two motor launches on the river. The Oder is well adapted for such craft. The river commerce is carried on by flatboats, tugs, and chains. A small fleet of steamers

carry passengers up and down. The boat builders named herewith [list filed in the Bureau of Manufactures] make mostly flatboats, rowboats, etc. (very few motor boats), but they might be interested in the cheaper American motor craft. There are two large rowing clubs here, which have annual racing meets.

Correspondence in English would be of little use. If the sending of salesmen is impossible, letters in German, with prices quoted in marks (1 mark = 23.8 cents) and an estimate of the cost delivered in Hamburg, might be effective.

GREECE.

AMERICAN CATALOGUES DO NOT GIVE SUFFICIENT INFORMATION.

The following information concerning motor boats and automobiles in Greece is furnished by Consul-General George Horton, of Athens:

The following copy of a letter written by an Athens firm should be of considerable interest to American manufacturers. These people make the interesting criticism that the catalogues and advertisements of motor boats sent them from the United States contain little necessary information, and for this reason they have been obliged to ask the question in the following letter. The United States, they say, is a long way off, and by the time they get through corresponding the opportunity for a sale is often lost.

We have received two letters from you with regard to your speed boat engines, and we are now on the market for an engine of this class, 12 to 14 horsepower, and we should be pleased if you will let us have more particulars with regard to your engines, answering the following questions:

(1) Do your engines run noiselessly? (2) What do they run with—benzine or what? (3) What quantity of fuel would a 12 to 14 horsepower engine consume per hour, and if a 14-horsepower engine were run at a less pressure, what economy in fuel would there be? (4) Would a boat 32 feet long, 6½ feet broad, and 3 feet deep be suitable for one of your 14-horsepower machines; and if not, what would be the suitable size? (5) What would be the price of one of these machines either f. o. b. New York or c. i. f. Piraeus? (6) What would be the speed obtainable? (7) Would you accept payment for the machine after trial?

We would deposit the value of the machine with any bank here indicated by you against delivery of the shipping documents, and the money would be remitted to you by the bank after the machine had been tried and had given satisfaction.

To our knowledge there are at least six such machines wanted here this summer, and if yours is seen and liked we shall be able to obtain the orders for them all for you.

A society recently formed has already imported six automobiles, viz: (1) For passengers, double phaeton, 50 horsepower, 6 cylinders; (2) Limousine, 18-24 horsepower, 4 cylinders; (3) demi-Limousine 24-30 horsepower, 4 cylinders; (4) coupe, 14-18 horsepower, 4 cylinders; (5) freight wagon, 3-ton, 20-22 horsepower; (6) freight wagon, 4-ton, 20-22 horsepower, 2 cylinders.

The company hopes to sell other wagons, passenger and freight, to be used for communication between points not connected by railway. The company maintains a garage with complete installation of machinery for repairs. They use American tools and oils, brought from France. The duty on automobiles and baggage is 10 per cent ad valorem; on accessories, 10 per cent.

SCOTLAND.

MOTOR BOATS AS LIFE-SAVERS AS WELL AS FOR PLEASURE CRAFT.

Consul Maxwell Blake, of Dunfermline, submits the following report concerning the various uses to which motor boats are applied in Scotland:

The motor boat is gradually gaining in favor along the Scottish firths, as was recently indicated by the proposal of a lifeboat institution to place in commission a motor lifeboat at Broughty Ferry on the Firth of Tay. Considering the importance and difficulties attending the rescue of human life at sea, the fact that a motor lifeboat has been decided on for such work is the most practical kind of an indorsement of the merits of the marine combustion engine.

Not long ago the Scottish Marine Motor Club was organized, and is now actively engaged in exploiting the motor boat for river and inland lake pleasure and sport, and reliability trials have been instituted toward publically demonstrating the utility, economy, and reliability of the motor boat under any and all conditions. On July 17 to 20 the first official trials will be held by the organization, and both medals and certificates of performance will be awarded and issued for the fastest boat, on M. M. A. rating, as well as to the most economical boat, irrespective of its class. The Scotch makers of engines are putting forth special efforts this season, owing to the growing English competition.

From trustworthy sources I understand that there are not at the present time probably more than 500 motor boats in all Scotland, which is surprisingly few when one considers the splendid opportunities for their use along the numerous estuaries, almost innumerable canals, and picturesque inland lakes, which annually attract a great influx of tourists and sportsmen.

The Dunfermline consular district extends along the Firth of Forth for a distance of about 50 miles, but this particular region of water front is less adapted to motor-boat traffic than some other more favorably sheltered situations, especially along the west coast. This district is therefore hardly a proper one in which to establish a distributing center, although agencies could be opened at the following places: Aberdour, Kirkcaldy, Burntisland, Kinghorn, Stirling, and Alloa. Not much, however, could be promised in these places in comparison with opportunities along the west coast.

STRAITS SETTLEMENTS.

MOTOR CARS FOR MUNICIPAL PURPOSES IN SINGAPORE.

Vice-Consul-General George E. Chamberlin furnishes the following information concerning the question of substituting motor cars for horse transport in Singapore:

At the beginning of the year the municipal commissioners of Singapore purchased two 12-15 horsepower five-seated motor cars, which were handed over to the president of the commissioners and the municipal engineer for their use with a view to reporting whether it would be advantageous to substitute motor car for horse transport. After six months' running a report was made on the cars and the

finance and general purposes committee was considering at the end of the year what officers should be provided with motor transport and on what terms cars should be granted.

There is no doubt as to the utility of a motor car for an officer who has long distances to travel, but the initial cost is high, and the difficulty has been to meet the views of certain officers to whom motor transport would be useful, and at the same time exercise due economy in the administration of the municipal fund. The saving of time gained by the use of mechanical transport is enormous, but the type of car first obtained, though it has given admirable results, is too expensive for general application, and the cars are more powerful than necessary in a city like Singapore, where the streets are practically level and the roads in the surrounding country good, with only slight grades.

TASMANIA.

A MARKET FOR AMERICAN MOTOR CARS THAT NEEDS EXPLOITING.

Consul Henry D. Baker, of Hobart, furnishes the following information concerning the working up of a trade in American motors in Tasmania and Australia:

As the duty on the chassis for motor cars imported into the Commonwealth of Australia has been reduced from 35 to 5 per cent ad valorem, an opportunity seems open for increased sale of American motor cars in this colony. The former duty was 20 per cent ad valorem on all imported automobiles, inclusive of both body and chassis. The new tariff raised this duty to 35 per cent, but a later amendment, while leaving the 35 per cent duty on the body of the car, reduced the duty on the chassis to 5 per cent and made the English chassis free. As by far the greater part of the value of most motor cars, probably two-thirds, is comprised in the chassis, it is thus evident that, considering the motor car as a whole, a substantial reduction has been made in the duty. The chassis need not be separated from the body of the car in shipping it, but on arrival at destination the value of the chassis will be separately appraised.

HOW THE AMERICAN CAR IS HANDICAPPED.

Tasmania is a country of fine scenery and exceptionally good roads, and, now that the tariff on foreign cars has been materially reduced, would probably prove a good field for American motor cars if only American manufacturers had agents in Hobart, or even in Melbourne, competent to explain their advantages as compared with the better-understood cars of English and French manufacture, which are represented by direct agents, and if only there were a few American mechanics here competent to do whatever repair work is necessary, and if proper facilities could be afforded of replacing parts which may become broken or worn out. The Tasmanians, while admiring the design and construction of American cars, know that they would have to rely on themselves to keep such cars in order, and that if anything should go wrong with certain parts it might take months for new parts to be obtained, owing to the fact that most American automobile manufacturers have made no adequate arrangements to promptly supply needed parts to users of their machines in this part of the world. The facts that American cars are not fully understood in Tasmania as compared with the English

and French cars, and that the parts are difficult of replacement or repair, have created a strong prejudice against them. Moreover, most of the automobiles in use here which have come from the United States are cheap cars, well worth what they cost, no doubt, but which are unfortunately compared with the higher grade and more expensive English and French cars. It does not appear to be appreciated here that American cars selling for \$2,000 and upward possess equal if not superior merit to the high-grade cars of the countries named. The first motor cars which ever came into Tasmania were cheap American makes, which met with poor success on the hilly roads of the island, easily got out of order, and were difficult to repair, thus creating a prejudice against them which will take time and work to overcome. More recently, however, some improved kinds of cheap cars have established a favorable reputation for themselves, and especially distinguished themselves in a reliability race between Launceston and Hobart last November. Five of these cars, 9 h. p., were entered for the race, and four received certificates, their time ranging from five hours and four minutes to five hours and fifty-eight minutes for the 120 miles, which is a good average, considering the roughness of the country.

If a few good garages managed by American mechanics could be established in Tasmania, it would probably result in greatly helping the sale of American cars throughout the Commonwealth of Australia, as well as in Tasmania itself.

AUTOMOBILES SUITABLE FOR THE COUNTRY.

In manufacturing automobiles for export to Tasmania it would be well to build millimeter size wheels, and also use millimeter threads for the spark plugs, avoiding the "freak" plugs, as it is hard to get parts in Tasmania other than millimeter sizes. It is always possible to procure here French but not American plugs. It is the same as regards tires. Also it would be well to fit out cars for use in Tasmania with high-tension magnets and accumulators with dual ignition, as most of the English and French cars are fitted out this way, and the motorists here have become accustomed to them; and it should be remembered that Tasmania is not a country where it is possible to procure good dry cells at any time, as they are nearly always stale by the time they reach the Tasmanian consumer.

The motorists here, as a rule, do not appear to favor high or even moderate powered cars. An American car owned by an American in Launceston is the highest power car in Tasmania. The cars which are most popular are between 10 and 18 horsepower, with multiple cylinders, not less than two and preferably four, with clutch and sliding gear transmission, not the planetary as fitted to most medium American cars. Again, they must be able to seat at least four, as the two-seated runabout is evidently not at all popular here. It is not easy to buy in Tasmania gasoline of the good quality used in the United States. The usual motive power is naphtha, known locally as "motor spirits," most of which is only about 68 proof, and the best of which is only 72 proof, though according to the instructions in the catalogues of some American cars it should be 76 proof.

MOTORING TOURISTS IN TASMANIA.

About 25,000 tourists from the mainland of Australia visited Tasmania during the recent summer season, and a number of them

brought their cars with them. The metal roads of Tasmania, built originally by convicts, are superior to most of the roads of the mainland of Australia, though they are very hilly, and make many very sharp turns. As the country is thinly populated, and settlements, as a rule, few and far between, it often involves extraordinary inconvenience when there is a break down. The most popular route is between Hobart and Launceston, 120 miles, from the south to the north of the island. The roads on the east coast of the island, where the scenery is exceptionally fine, are also quite popular with motorists. As Tasmania is active in advertising its attractions for tourists, the number of motorists coming here for the summer season will probably increase from year to year.

COLOMBIA.

PETROLEUM MOTOR BOATS MOST SUITABLE FOR THE MARKET.

The following information relative to the use of gasoline and petroleum boats in Colombia is furnished by Consul Isaac A. Manning, of Cartagena:

Opportunities for the sale of motor boats are apparently good here, although the present unsatisfactory economic conditions, causing a shortage of purchasing ability, will not make the field so good as under normal conditions. It is hoped, however, that present conditions will soon improve.

The demand here seems to be more largely for boats using crude or refined petroleum as fuel, and those in use here are principally of this character. Four or five firms in this city have engines using crude petroleum and refined kerosene, and a Monteria merchant has a petroleum boat, which he uses for passenger service on the Sinu.

Two American companies use open sea and river gasoline boats in connection with their logging camps where they are getting out cedar and mahogany. The master mechanic of the Cartagena railway has two gasoline boats and a "track automobile," using gasoline. The other gasoline boats which have been brought here have proved very unsatisfactory, perhaps from lack of knowledge of their intricate machinery, as well as from the difficulty of getting gasoline and batteries for supplying these boats. These two latter difficulties are encountered by all owners of gasoline motors here, as gasoline is very expensive, and but few opportunities offer for its importation. Extra batteries are not on sale here and must be brought from abroad. Gasoline pays a high tariff duty.

Crude petroleum is easily imported, and is kept constantly on sale, enjoying a heavy differential tariff over both gasoline and refined kerosene. This fact and the greater simplicity of the petroleum motor make this style of motor far more satisfactory and in greater demand. The boats of this class in use here seem to be giving excellent satisfaction.

In this line of trade, as well as in many others, traveling salesmen, speaking Spanish, could accomplish a great deal more in a few days of personal effort than can be done with catalogues. If the latter are to be sent, they should be in the language of the country.

BRAZIL.**MOTORS AND MOTOR BOATS IN RIO DE JANEIRO.**

Consul-General George E. Anderson furnishes the following information concerning the trade in motors and motor boats in Rio de Janeiro and the best manner of enlarging the American trade therein:

While the general condition of the trade in motors and motor boats in Rio de Janeiro is not very promising, reflecting in a way conditions of trade generally, the record of the past year in the trade has been somewhat more satisfactory to the United States than previous years. The imports of motor boats from the United States are still very irregular, and it may be said that there is no regular trade in them, but this is also true of boats from other countries. Importers in Brazil are commencing to appreciate the possibilities of the trade, however, and, on the other hand, American manufacturers are commencing to appreciate the fact that American boats can be sold here. Several have secured agents who will sell goods in increasing quantities in the near future. Nothing is to be expected in this field by correspondence.

There will not be the largest possible sale of American boats here until some American manufacturer makes arrangements for the maintenance of a stock of boats in Rio de Janeiro, to be kept up by cable orders, and to do this American manufacturers will have to be willing to give agents more liberal credit and other terms than have been so far afforded. The matter of price is of comparatively little importance, although, of course, as between two boats of equal merit the cheaper will be taken. American boats and motors are well received, and there ought to be no difficulty, with proper efforts, in securing a preponderance of American boats in the local trade.

The increasing number of motor boats on Brazilian waterways, especially in Rio de Janeiro harbor, is a constant stimulus to the trade. That any American business is done here at all under present methods is remarkable. The first need of American boats, motors, and equipment here is that of active agents. Without them trade will be small, irregular, and unsatisfactory.

Dutch Development of Sumatra.

According to Vice-Consul-General George E. Chamberlin, of Singapore, Jambie, a province of South Sumatra, formerly closed to private enterprise, is coming more and more into notice in Holland, to which he adds:

The Government means to throw the country open, and is making inquiries as to the best way of doing so. It is intended to draw up the concessions so strictly that the concessionaries will be obliged to work the oil fields effectively. They will not be allowed to hold the oil fields in reserve, this stipulation being aimed at attempts to start a monopoly. The concessionaries will be bound to pay duty on the oil they produce. Hitherto the petroleum companies have, so the Nieuws van den Dag remarks, protested against a petroleum tax, but it is understood that the Government means to make them pay the tax should they seek a foothold in Jambie, which they are almost sure to do.

GERMAN BANK CHECK LAW.

FOREIGN CHECKS A CONVENIENCE AND A NECESSITY IN SAXONY.

The following information concerning the law relative to foreign checks payable in Germany and German checks payable in foreign countries is furnished by Consul Carl Bailey Hurst, of Plauen:

Owing to unfamiliarity in some cases and a wrong interpretation in others, it is necessary to emphasize, with particular reference to foreign checks, the salient features of the German check law, which went into effect on April 1, 1908. It may be mentioned that payment by check is by no means so general in Saxony as in many parts of the United States. The tendency of the new law is to popularize the check as a means of payment, with the purpose of reducing somewhat the tremendous circulation of metallic and paper money. Since the business depression at the close of 1907, paper and silver are more in evidence in this district than formerly.

This check law is wholly distinct from the law governing the postal check service, which goes into force at the beginning of 1909. Owing to the heavy international trade, due to the export of Saxon manufactures and the import of foreign commodities, banking relations between other countries and this Kingdom have assumed proportions of great magnitude. In Plauen alone the many millions of dollars representing the value of the local exports have rendered foreign checks a convenience and a necessity. By its provisions the law promulgated has taken cognizance of these transactions. The recent statute stipulates that the Federal Council of the Empire shall determine the time limit within which checks made out abroad and payable in Germany are to be presented for payment. It fixes as well the time limit for checks written in Germany and payable in foreign countries, provided that there is no conflicting foreign legislation.

GERMAN CHECKS PAYABLE IN FOREIGN COUNTRIES.

The Federal Council has accordingly set the limits as follows: For all countries in Europe, with the exception of Iceland and the Faroe Islands, checks must be presented within three weeks from date; for the littoral of Asia and Africa along the Mediterranean and on the Black Sea or for the islands in these bodies of water, within a month; for the United States, Canada and Newfoundland, Mexico, the Azores, Madeira, the Canaries and Cape Verde Islands, within two months; for all other foreign countries, including the German protectorates, within three months; this last clause embraces our farthest insular possessions.

These limitations also hold good for checks made out of Germany, and payable abroad, in so far, however, as no applicable foreign law prescribes differently. The usual provision is also stated that in the event the date of payment falls on a Sunday or on a recognized State holiday, the following workday is to be counted as the final date of presentation.

CHECKS PAYABLE IN GERMANY.

Checks payable in Germany can only be drawn on banking firms under State supervision, public institutions, registered companies that may be engaged in banking business, and on savings banks. Otherwise, checks are subject to an internal-revenue tax. Only checks pay-

able abroad can be made out to others, with the proviso that the laws at the place of payment so permit.

Checks are always payable on sight, and the designation of another time of payment renders the check void and subject to tax. Checks dated ahead must be stamped for internal revenue. A check can not be recalled during the time within which it should be presented for payment. It is in the interest of anyone holding a check to present it as soon as possible at his bank, but not to give it as a means of payment to a business firm or private person.

If the amount of money to be paid be stated on a check in letters and in figures, the amount given in letters is to be considered as the correct sum in variation between the two. If the sum be given several times in letters or in figures, the least sum is to be taken as correct. A check can by indorsement be transferred, unless the words "Not to order" or an equivalent are mentioned. If the indorser write "Without liability" or an equivalent, he is relieved of responsibility in connection with the indorsement. On checks where the signature of the writer or of the indorser may be forged, the remaining authentic signature is binding.

COFFEE IN MOROCCO.

IMPORTS COME VIA EUROPE—AMERICANS HAVE NATURAL ADVANTAGE.

Vice-Consul-General George E. Holt, of Tangier, contributes the following on the trade and consumption of coffee in Morocco, and makes suggestions for securing portion of the trade for the United States:

In 1906 the total amount of coffee consumed in Tangier and vicinity was 2,391 bags of 132 and 230 pounds each, valued at \$35,865. Exact figures for 1907 are not yet obtainable, but they will certainly exceed those of last year. The coffee consumed in all Morocco will reach probably \$200,000 per annum.

The greater part of this coffee comes from South America, but passes through the hands of the middleman of France, Germany, England, Spain, Belgium, Austria—anyone except the United States jobbers who might be expected to handle it, because they are the logical connecting link between South America and Gibraltar. In the export of coffee to Tangier, and the same holds true of the other Moroccan ports, the various nations rank as follows: France, Germany, Great Britain, Austria, Belgium, Spain, Italy. France has about 60 per cent of the total trade, and is followed by Germany with about 10 per cent.

The samples of coffee accompanying this report [and obtainable from the Bureau of Manufactures] are representative of the various qualities sold here from the highest to the lowest grade, unroasted. They are per pound as follows: Mocha, 25 cents; Caracolillo, 22½ cents; Porto Rico, 20 cents; Santos, 17½ cents; and Rio, 15 cents.

There would seem to be a field here not only for the more expensive grades of American coffee, but more especially for the cheaper grades, such as the package coffee which retails in the States at 25 cents for 3 pounds and has the advantage of being roasted and ground, and which is really superior to most of the coffee sold here at 20 cents or 25 cents per pound.

SUBSTITUTE FOR CELLULOSE.

A NEW GERMAN COMPOUND WHICH COMPETES WITH CELLULOID.

According to Consul Thomas H. Norton, of Chemnitz, a German chemist has lately perfected a process which brings into competition with celluloid a new composition possessing similar plastic and elastic properties, but free from the easy and somewhat dangerous combustibility common to celluloid articles. The consul tells of the origin and advantages of "cellit."

A few years ago the chemist obtained a cellulose acetate or acetyl-cellulose by the action of acetic acid on cotton and other forms of cellulose which possessed a high degree of compactness and toughness, but for which there was no specific technical application. Now he has succeeded in producing another form of cellulose acetate, named cellit, which is endowed with distinctly valuable properties.

It is easily soluble in such solvents as alcohol or acetic ether, which do not seriously affect the health of workmen; and, what is more important, it combines with camphor exactly as does gun cotton, yielding plastic masses quite similar to ordinary celluloid. Camphor can be replaced by other organic substances, and the resultant products range from hard and tough to soft, leather-like, even rubber-like compositions. All of these varied forms of cellit are perfectly transparent, totally unaffected by water, free from brittleness, and, above all, not readily combustible. Some varieties do not burn at all. Others burn in a flame, but combustion ceases when the flame is removed.

VALUABLE FEATURES OF NEW MATERIAL.

The different properties of cellit are characteristic of glass, gelatin, celluloid, leather, and rubber, and it is capable of replacing each of these materials for divers purposes. Probably new technical applications will soon arise, as we have lacked hitherto a substance at once transparent as glass and pliable as a woven fabric.

It would seem to lend itself admirably for decorative effects, as it can be molded like crystal or receive the delicate imprint of the finest designs. The sheets of cellit are prepared in all degrees of hardness for the purpose of receiving impressions. The results sometimes resemble enamel, again fine leather, or entirely novel effects are evolved. Especially interesting are the specimens of patent leather and of linoleum coated with cellit. The designs of the linoleum are not printed on the surface of the tissue, but are part of the transparent cellit coating with greatly enhanced effect.

Cellit insulation for electric wires combines the advantages over the present materials of cheapness and more attractive appearance, while occupying less space.

A distinct field exists for cellit in preparing waterproof, air-tight containers for perfumery, bonbons, etc.; in meeting many needs of the bookbinder and of the surgeon; in the manufacture of toys, fans, and various articles of domestic use where resistance to water and pliability are the chief requirements.

USE FOR HOLLOW OBJECTS AND PICTURE FILMS.

To what extent cellit can replace celluloid is not yet definitely ascertained. Certain technical difficulties have recently been over-

come in blowing articles of the new substance. Such hollow objects as balls, dolls' heads, and the like are now as easily prepared as from celluloid.

The latest application is among the most important. It is the use of cellit films for the cinematograph. Its manifest superiority over celluloid for this purpose results from its noncombustibility.

A cellit film exposed for ten minutes to the concentrated light of an arc lamp does not exhibit the slightest alteration. A celluloid film, under the same conditions, bursts into flame after the lapse of only three seconds. The cinematograph has now entered so extensively into the category of popular entertainments that a film material will be most welcome which will obviate the serious danger thus far attendant upon the employment of the current mechanism and already productive of several tragic catastrophes.

BRITISH INDIA NOTES.

Consul-General William H. Michael, of Calcutta, supplies the following items of interest concerning British India:

Owing to the deplorable condition of the gunny trade, it is proposed to further curtail the factory operations to four days a week, or spread the sixty hours over the entire week.

Calcutta has less than a half dozen tanneries. It has been suggested that a government harness and saddlery factory be started in Calcutta to attract capital and develop the industry.

The exports of rape seed from India in tons were 267,171 in 1907-8; 186,440 in 1906-7; 99,684 in 1905-6; 257,745 in 1904-5, and 217,150 in 1903-4. The exports of linseed in these years in tons were 309,894, 218,941, 289,443, 559,100, and 340,818, respectively.

During the year 1907-8 the Calcutta Electric Supply Company sold 5,487,853 units of electrical energy, a reported increase of 20 per cent over the previous year. The net profits of the year are stated to be \$286,380. A dividend of 8 per cent was declared.

As a result of the sharp competition between Indian buyers for the Calcutta market and Chinese buyers for the Straits Settlements, the prices of elephant ivory tusks are kept so high that it is difficult for the Burmese ivory carvers to get ivory to keep them employed.

The manufacture of woven stockings and vests has been started in eastern Bengal and Assam, and the weaving business generally has taken on new and increased life and activity. The demand for "mainamati," manufactured at Tipera, Assam, has improved, and the weaving industry at Dacca, Mymensingh, and Faridpur is more flourishing.

Burmah's gold output increased from 2,301 ounces in 1906 to 3,838 ounces in 1907, owing to the use of an improved dredger; the tin output decreased from 92 tons, worth \$67,500, in 1906, to nothing in 1907, due to the mines being closed through litigation; the petroleum product in 1907 was 148,888,002 gallons, valued at \$2,997,942, against 137,654,221 gallons, valued at \$2,823,330, in 1906; the ruby output last year was valued at \$577,325, from which a royalty of \$99,240 was paid to the State.

TASMANIAN SHELL NECKLACES.

HOW AN INDUSTRY IS CARRIED ON IN AN AUSTRALIAN ISLAND.

Consul Henry D. Baker, writing from Hobart, gives the following account of the traffic in shell necklaces in that part of Australia:

The invoices of shell necklaces exported from Hobart to the United States for the year 1907 amounted to \$3,083. The shells which are used for the stringing of necklaces for this export trade are known locally as the "mariners' shell," of which there is a green and a blue variety of many different sizes, varying from about one-fourth inch to one-half inch long, the width being about half the length and the shape that of a cornucopia. They are found among the seaweed at low tide, around the south and east coasts of Tasmania, and among the Furneaux group of islands in Bass Strait to the northeast of Tasmania.

The shells, to have any value, must not be taken dead, but while the fish within them is alive, otherwise they have no luster. After being taken from the seaweed they are exposed to the sunlight and atmosphere for several months, and the fish eaten out of them by flies and ants; after which they are immersed for further cleansing in hydrochloric acid after which treatment their appearance is quite lustrous, and shows many of the prismatic colors. Some of them are strung in this natural state, while others are dyed pink, light or dark blue, green, and yellow. After stringing they sell at retail in Hobart for about 60 cents a necklace, or about \$4.80 a dozen necklaces, and in still larger quantities at about \$4.50 a dozen. The sale to tourists from the mainland of Australia during the summer season is very large.

SOURCES OF SUPPLY—RETURN PURCHASES.

The best shells are found in the vicinity of D'Entrecasteaux Channel. Those found on the east coast of Tasmania are about the same in appearance, but are usually more easily broken than the shells of the south coast of Tasmania. Those of the Furneaux group are apparently of good quality, and when properly cleansed make very attractive necklaces. In these islands the work of gathering and stringing the shells is performed mostly by half-caste women and children. On a recent visit to this group I found a number of attractive varieties of shell necklaces which are very little known to the Hobart trade. They were made up from shells known locally as "penguins," "toothies," "cats' teeth," "rice" shells, "feather" shells, and "painted ladies." The half-caste children at Cape Barren Island were contributing quite a number of these interesting varieties while I was there, to be sold for the benefit of the children's hospital at Launceston, Tasmania.

Hobart firms which export shell necklaces to the United States are also importers to a smaller extent of shell and pebble ornaments from the same American firms which buy the necklaces, pearl shells being the most common article of import. The cities of San Francisco and Vancouver, British Columbia, furnish for the local tourist trade many bracelets made up from polished Japanese and Chinese pebbles, to which is usually attached a spangle—the heart shape of the island of Tasmania. It is said that these bracelets are the work of Japanese in these two cities.

ABALONE FOR CHINA.

MARKET FOR CALIFORNIA SHELL FISH—PRICES AND IMPORTS.

Vice-Consul E. Carlton Baker, of Amoy, advises that there is considerable opportunity in China for the sale of the abalone, a shell fish found in large quantities on the Pacific coast of the United States, to which he adds:

No attempt, as far as this consulate can ascertain, has been made to introduce this American product here, though large quantities of abalone from Japan are now sold in China under the name "Awabi." It abounds in Japanese waters, and its use by the Chinese as a food-stuff dates from time immemorial.

There is an unlimited market for the prepared product in China, for awabi now constitutes one of the most delicate dishes of the better class of Chinese. Its demand is constant throughout the year and its use universal throughout the Empire.

Since the introduction of the canned abalone in comparatively recent years, there seems to be a growing demand in favor of the canned instead of the dried product, both coming chiefly from Japan and the Loochoo Islands. The import duty on awabi in bulk is 1.5 haikwan or custom taels per picul (133½ pounds), or 83 cents gold per hundredweight. The importation into Amoy amounted to 41,333 pounds in 1907, against 44,266 pounds in 1906 and 52,366 pounds in 1905.

The canned abalone sells in the local market at \$12 Mexican (\$1 Mexican=50 cents gold) per case of 48 cans, or \$3 Mexican per dozen, each can containing one large abalone or two smaller ones, while the retail price averages about 35 cents Mexican per can. The dried abalone sells at about \$2.20 Mexican per catty (1½ pounds), or 69 cents gold per pound, and its value varies according to the freshness of the prepared product, the salty ones being in disfavor with the Chinese.

The Japanese product now controls the market, although some Australian ones are being introduced here, but they are not yet popular and can hardly compete successfully with the Japanese. The price for this abalone (Australian) is only about 32.5 cents gold per pound.

The dealers in Amoy are numerous, and are at present dependent upon the jobbers in Hongkong for their supplies. American dealers desirous of entering this field would do well by establishing agencies at Shanghai and Hongkong, as these places are the distributing centers. Direct shipments could easily be made from San Francisco to these ports. [A list of the principal abalone dealers at Amoy may be obtained from the Bureau of Manufactures.]

As the abalone abounds in southern California in quantities sufficient to export at the rate of hundreds of tons per annum this industry could probably be considerably developed. Not only would there be a large profit from the edible portion of the abalone, but the shell could be also sold at a good price, and would constitute a valuable by-product.

CONSUL-GENERAL HENRY BORDEWICH sends a Norwegian newspaper notice showing that railroad traffic has now been partially opened between the cities of Christiania and Bergen.

CONVICTS AS FARM LABORERS.**SUCCESSFUL EXPERIMENT IN FIELDS OF AN AUSTRIAN COMMUNITY.**

Consul Charles B. Harris makes the report from Reichenberg that, owing to the scarcity of farm laborers in that part of Austria, the civil authorities are experimentally hiring out to farmers convicts for work in the fields, some of the results being stated:

The experiment is said to be proving successful, especially to the farmers. The selection of the convicts for such work is made from the most orderly and well-behaved and from among those who it is thought will not attempt to escape. The prisoners so far employed are much pleased with the work, and their employment is an incentive to others to behave well in the prison, that they also be taken to the fields. The work by the convicts is willingly and well done, and as much labor is performed by them as is done by the regular farm employees, if not more.

The prisoners are taken every morning to the field, carrying with them their food, except a small lunch consisting of bread and butter which is furnished by the farmer. The farmer pays the State 1 crown and 40 hellers per day, equal to 28 cents United States currency. Of this sum 30 hellers, or 6 cents, are credited to the account of the prisoner and paid to him upon his discharge from imprisonment.

It is stated that there is no objection among the labor and trade guilds or the people to the employment of convicts in the fields as agricultural laborers.

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LABOR CONDITIONS ABROAD.

GERMANY.

MUNICIPAL INSURANCE AGAINST IDLENESS.

Vice-Consul Walter A. Leonard, of Kehl, furnishes the following information concerning the problem of insurance against idleness in Strassburg:

On December 27, 1906, the city council of Strassburg adopted rules and regulations for the insurance of the unemployed [a translation of which is on file in the Bureau of Manufactures]. The city of Strassburg, in order to minimize unemployment as much as possible and to have an indirect control of the same, has offered to give an extra allowance of 50 per cent in addition to that which any industrial society in the city contributes to its members who are involuntarily unemployed, provided, of course, the conditions laid down in its rules and regulations are complied with.

According to a report of the city council recently published, the introduction of this system of insurance has proved to be a success in Strassburg, so much so that no less than 50 cities in Germany have written inquiries to the local authorities concerning the workings of the system, with a view of introducing the same into their respective municipalities.

Twenty different industrial societies, comprising a membership of about 25 per cent of the workmen of Strassburg, applied for membership within a month after the adoption of the rules and regulations by the city council. Of these 20 societies 12 received the guaranteed support, while the other 8, on account of their prosperous condition and plenty of work, did not need to take advantage of the city's offer.

AMOUNTS PAID—ENCOURAGES INDUSTRIAL UNIONS.

The city was called upon to pay 1,900 marks (\$452) in 1907, while industrial societies paid 8,000 marks (\$1,904) to its members for such insurance. The apparent inconsistency of the city not paying 4,000 marks (\$952)—50 per cent of the sum paid out by the societies—is explained by the fact that all the idle workmen who received support from their respective societies did not comply in all particulars with the city's rules and regulations, hence were not entitled to the extra allowance, the two chief reasons being a residence of less than a year

in the city and the failure of the workmen to report regularly at the city employment bureau.

This insurance system does not reach all the laborers, in particular the unskilled classes who belong to no industrial societies. It is true that less than 25 per cent of the laborers at the beginning of this year came under the provision of the city's allowance guaranty, but the director of the local employment bureau says that the percentage of workmen belonging to industrial societies has increased since the city introduced this system and that the percentage will undoubtedly continue to increase and that these insurance rules and regulations will encourage the organization of industrial societies whose aim is to increase proficiency in their respective trades and educate their members generally, and eventually the great majority of laborers, so far as unemployment is concerned, will be under the control of the city through these societies.

ALSACE-LORRAINE.

CITY EMPLOYMENT BUREAUS PLACE LABORERS GRATUITOUSLY.

Vice-Consul Walter A. Leonard, of Kehl, furnishes the following concerning employment in Alsace-Lorraine:

Public employment bureaus whose services in placing laborers are gratuitous exist in the larger cities and towns of Alsace-Lorraine, as well as being more or less developed all over Germany. There is no law to exclude private employment agencies, but the few that exist in this consular district only handle house servants and are insignificant compared with the city bureaus. The Germans recognize that the activities of private employment agencies tend to shift laborers from place to place and cause too many changes for the good of employers and employees; hence the municipal governments prefer to carry on this business at their own expense rather than permit these private concerns to have the field to themselves and influence laborers to give up their positions in many cases merely to be privileged to again place the same laborer elsewhere in order to secure compensation for such services.

MUNICIPAL LABOR BUREAUS.

Fifteen different municipalities of Alsace-Lorraine, ranging in population from 5,000 to 175,000, conduct employment bureaus which aim to keep in close touch with the various organizations of employers and employees. In the smaller towns the directors of these bureaus are usually acquainted personally with the employers and most of the employees, and in every case it is the aim of the city to give the directorship of these employment bureaus only to city officials who can work harmoniously and effectively with employers and the laboring element.

In many of the cities employers never think of turning to anyone but the city employment bureau for help, and industrial organizations likewise depend upon this agency to place its members when they are out of work. In some cases there is a contract between certain trade organizations and the city bureaus, to the effect that only the city shall have the privilege of placing its members. Such fixed agreements, however, have not always been found practicable, because there

may be times when a private agency can to advantage find employment for one or more of its laborers, which privilege such an agreement naturally forbids.

COOPERATION WITH OTHER INSTITUTIONS—FOREIGN LABORERS.

The cooperation with hospitals, cheap but sanitary lodging and boarding houses, city charities, house-renting agencies (a list of the vacant dwellings being kept by the city), poorhouses, etc., is an important feature. The director of the Strassburg bureau says that the city charities work in cooperation with his office so that no one can get any help from the city without a proper card having first been filled out for him by the employment office, attesting that he is either incapable of working or that the city can furnish no work. This system leaves no field, practically, for tramps and beggars, because if they are really in want they will get assistance from the city either in the form of employment or temporary support.

Of the foreign laborers in this section of Germany, the Italians are in the lead. They have not been successfully controlled by the city bureaus, for they seem to prefer the mediation of private employment agencies. In their case it is not dealing with the individual, but usually with leaders of their nationality, who control entire colonies of workmen. They are desirable for work in stone quarries, coal mines, sewer construction, and all such labor as requires large numbers of unskilled workmen. However, because of their propensities for moving about, it is never certain how long they will stay with their work.

Second in numbers to the Italians are the Swiss laborers, but they are so much like the natives that they are hardly looked upon as foreigners; Austria-Hungary and France also furnish some laborers, but in all of Alsace-Lorraine during the year 1907 the foreigners represented only 6.54 per cent of the entire laboring element.

DEARTH OF LABORERS FOR AGRICULTURE—WINTER WORK.

According to the reports of various employment-bureaus, there is a scarcity of laborers for agricultural pursuits, and this also affected work in the vineyards, for Alsace-Lorraine has 25 per cent of the vine-planted area of Germany, 5 per cent of her own area being devoted to vineyards. Some laborers were brought from France for this work, their railway fare having, in most cases, to be paid by the employer. The city bureau of Metz, Lorraine, explains that opportunities for higher wages and the charm of industrial pursuits lure the unskilled workmen away from the more healthful occupation of agriculture.

Some of the cities report no lack of work all the year round, but larger places like Strassburg, Muelhausen, Metz, and Colmar tax the employment agencies to the utmost to sometimes find suitable employment for idle laborers during the coldest season, when building operations and improvements can not so readily be carried on. The bureaus solve this largely by sending unmarried laborers to outside places, especially to the coal mines, where extra help can always be used, the railroads furnishing transportation at half fare, and by such labor as ice cutting, thus tiding over the few weeks of the year when cold weather causes work to suffer. The city of Strass-

burg uses laborers who can find nothing else to do in tearing down the old city wall, and this has been styled emergency work.

MISCELLANEOUS.

On account of the difficulty in placing released convicts the cities accept them as day laborers on the streets and for city improvements. Further, the employment bureaus cooperate with special societies for released convicts, which aim to give such laborers proper encouragement and suitable occupation.

The city bureaus must keep in touch with the barracks and anticipate the discharge of large numbers of soldiers who have served their two years or more in the army, so as to locate them in suitable occupations upon their return to civil life.

Whenever the city finds an employer mistreating his workmen, failing to pay them regularly, or not keeping his factory in a sanitary and respectable condition, he is blacklisted by the city and does not receive the aid of the employment bureau.

The economic significance and the position of the city employment bureau in the municipal government is taught in the common schools. The schools and employment bureau keep in close touch with each other, for apprentices are taken from the schools to serve four or five years before they have any chance to earn average wages in the respective trades. Industrial, commercial, and technical schools cooperate with the city bureau, so that its students may be placed after the completion of their courses.

The various city bureaus report different ratios of skilled and unskilled laborers handled by them. In Metz, with 65,000 population, there were 3 unskilled to every 4 skilled. Muelhausen, with 100,000 population, had 69 unskilled laborers in every 100. In Strassburg, with a population of 175,000, there were 2 skilled to every 3 unskilled.

MAKING VACANCIES KNOWN—EXTENSION OF SYSTEM.

The press is utilized in making the vacant positions known to the public, the same being published at least weekly in 250 different newspapers of Alsace-Lorraine. Another effective method is the use of large posters with a list of all the vacancies. These posters are put in conspicuous places and not only give the laborers wanted in the various trades of the local city, but of all the 15 different municipalities of Alsace-Lorraine having employment bureaus. Thus at such places as the railway station one will find an itemized list of no less than 160 different occupations and the number of workmen needed that day, if any, in these respective trades. The railroads offer 50 per cent reduction in fare to all workmen who secure employment through city bureaus to all places more than 25 kilometers (15.5 miles) distant, good not only in Alsace-Lorraine, but in the neighboring States of Germany, which likewise have city employment bureaus.

Southern Germany has developed these public employment bureaus to a greater extent than middle or northern Germany. At the present time not only the employment bureaus of Alsace-Lorraine cooperate with each other, but those of entire south Germany, and efforts are now being made to so organize all these city bureaus that their cooperation will extend over entire Germany. To this end, the Fifth Congress in the interest of city employment bureaus will meet at Leipzig, November 12-14. A member of the Strassburg city coun-

cil, who has made a special study of labor problems, has expressed the hope that some representative of the United States will be present, because he believes that not only all of Germany, but eventually the principal countries of the world will thus cooperate in controlling the employment of laborers.

COLOGNE.

REDUCTION OF MINERS' WAGES IN THE RUHR DISTRICT.

Consul Hiram J. Dunlap, of Cologne, furnishes the following statistics concerning labor and wages in the coal mines of the Ruhr:

The report of wages earned by the miners of the Ruhr district, the most important coal mining district in Prussia, for the quarter ending March 31, 1908, shows that there has been a small reduction as compared with the wages paid during the last quarter of 1907, but as compared with 1906 the present wages are considered high.

The average daily wages of all mine employees for the first quarter of 1908, including miners, helpers, boys, and women, was reduced 12 pfennigs (2.86 cents) per day, as compared with the last quarter of 1907. The wages of miners, who compose 50 per cent of all the mine employees, during the first quarter of this year were 5.94 marks (\$1.41, as against 6.14 marks (\$1.46) in the last quarter of 1907. The wages of other classes of workmen employed in mines for the same periods were 4.15 to 3.96 marks (98.8 to 94.2 cents) in 1907 and 4.09 to 3.89 marks (97.3 to 92.6 cents) in 1908.

The total number of employees during the last quarter of 1907 was 309,353, which increased to 320,435 in the first quarter of 1908. The wages paid during same periods amounted to 123,287,069 and 122,362,054 marks (\$29,342,322 and \$29,122,169), a decrease, in spite of the increased number of employees, of 925,015 marks (\$220,154).

In most of the mining districts of Prussia, the report continues, the wages are a trifle less, and have fallen proportionally in all except two districts, where the increase in the iron mines has been about one-fourth cent per day.

These wages and changes no doubt appear insignificant to an American miner, but in this country, where the smallest coin is less than one-quarter of a cent, a very small change is considered important.

FRANKFORT.

DEMAND FOR WORK INCREASING.

Consul-General Richard Guenther, of Frankfort, reports that the retrogression of German industrial activity, evidenced by the state of the German labor market in April, continued through May, so that the demand for work has greatly increased over April. While this demand always increases in May, it has, however, been unusually large and was the largest since May, 1902. According to the tables furnished by the public labor bureaus, there were in May, 1908, for every 100 vacancies 161.5 applicants against 141.8 in the preceding month and 103.7 in May, 1907. The condition of the labor market in May and April of this year was the most unsatisfactory in many years, and every important branch of the German industries is involved.

The public labor bureau has issued a statement showing that for every 100 places open for labor throughout Germany in April, 1908,

there were 141.81 applicants, against 92.82 applicants for every 100 open places in April, 1907. For the first four months of 1908 the average number of applicants per month for every 100 places was 145.6, while the monthly applicants for every 100 places during the first four months of 1907 was only 109.

MAGDEBURG.

LABOR NOW AND TWELVE YEARS AGO.

Vice-Consul James L. A. Burrell, of Magdeburg, reports that a leading publicist, basing his argument on German official statistics, has reached the conclusion that the German workingman is now in a position to spend from 10 to 12 per cent more for necessities and pleasures than in 1895. He claims that a similar investigation in the United States shows an advance of 8 per cent in the same period.

BELGIUM.

CONSTRUCTION OF WORKMEN'S HOMES IN LIEGE.

The following report concerning the erection of workmen's homes in Liege and the betterment of public conditions thereby has been prepared by Consul H. Abert Johnson, of that Belgian city:

December 31, 1907, marked the fortieth year of the Liege Association for the Construction of Workmen's Dwellings, which had its inception in the outbreak of cholera in that city in 1866, and which clearly pointed to the dangers to which the whole population was exposed owing to the insanitary housing of a large contingent of the working people. To guard against such dangers in the future the association was organized for the purpose of providing the families of the working classes with comfortable and hygienic habitations at a minimum cost and upon easy terms.

Thus what is now known as the Société Liégeoise de Maisons Ouvrières was organized, with a capital of 400,000 francs (\$77,200), on September 21, 1867. It soon became evident, however, that the society required much more capital than this, and the King, the city of Liege, and many private individuals came to its aid, and the capital was increased to 1,501,000 francs (\$289,693), which enabled it to extend the sphere of its action and undertake on a large scale the construction of workmen's dwellings.

WORK ACCOMPLISHED.

The work accomplished by this society proves that the object for which it was created has been completely attained, for no epidemic has attacked the inhabitants of its towns, although a large number of the houses have been constructed to accommodate two families. Through the society's efforts more than 800 workmen's families have been provided with comfortable and sanitary homes under such favorable conditions as have enabled them to easily become the owners thereof.

The houses constructed by the society, up to December 31, 1907, numbered 562, of which 257 are sold and fully paid for by the owners, and 184 are sold, although not fully paid for, but are being

regularly paid for by monthly installments. The society's fortieth annual balance sheet shows assets amounting to 2,134,141 francs (\$411,889), with liabilities amounting to 265,692 francs (\$51,278).

HOW WORKMEN ARE ENABLED TO SECURE HOMES.

The maximum amount loaned to any one individual is fixed at 6,500 francs (\$1,255), including all legal charges in connection with effecting the loan.

The city agrees to lend the money for a period of maximum duration of 66 years, with the obligation on the part of the borrower to take out what is known as a mixed insurance on his life of not less than 1,000 francs (\$193), payable to himself upon reaching the age of 55, 60, or 65 years, or to his heirs, in case of his death. The rate of interest on such loan is $3\frac{1}{2}$ per cent when taken for 66 years; if taken for a less period the interest is proportionally increased. Upon examining the question from all points of view, the society decided that 66 years was preferable to a shorter period, provided that, at the same time, an insurance is taken out in excess of the 1,000 francs (\$193) required by the city.

An example will suffice to demonstrate the advantages of such a method. Take, for instance, a workingman 30 years old, who takes a loan of 6,000 francs (\$1,158). To secure such a loan for a period of 66 years he must pay interest at the rate of 4.65 per cent, and the Government life insurance department will at the rate of 2 francs (38 cents) per month guarantee him a sum of 1,002 francs (\$193.39) to be paid to him on reaching the age of 66 years, or, in case of his death, to his heirs. In this manner the workman is obliged to pay 25.25 francs (\$4.87) per month or 303 francs (\$58.48) annually.

By monthly payments of 25 francs (\$4.82), premium on insurance included, the workingman of 30 years of age can obtain, in making the loan payable in 66 years, a capital of 3,756 francs (\$725), guaranteed to his heirs in case of death. In this case the premium on his insurance will amount to 7.50 francs (\$1.45) per month and the interest on the loan will amount to 17.50 francs (\$3.38) per month.

FRANCE.

EFFECTS OF THE LABOR ACCIDENT AND WEEKLY REST LAWS.

Consul William H. Hunt, of St. Etienne, furnishes the following report relative to the working of the laws relating to labor accidents and weekly rest in France:

The influence of the labor accident and weekly rest laws has been diversely interpreted as they affect the employers and the workmen and also the prosperity of the nation's industries. It is natural to infer that these laws are not identical in their application or consequences for all kinds of industries, and in order to understand their mode of working it is necessary to take a typical case—that of an industry with a working capital of \$200,000, employing 100 workmen per day.

To determine the apparent charges falling on the employer by reason of this legislation, it is necessary to consult the books of the

accident insurance companies to ascertain the insurance rate for the different industries. This rate varies, going as high as 12 per cent, but an average of 4 per cent will meet the purposes of this report. It has been computed that for 100 workmen earning an average daily wage of 87 cents the insurance rate for one day will be \$3.48, or for an industry working 350 days, \$1,218. These figures might appear exaggerated, but the insurance companies affirm that they will be obliged to advance the rates still higher in order to meet their increased liabilities.

WEEKLY REST LAW.

The law requiring one day of rest out of seven is divided into two sections—that relating to industries authorized to apply the rest by rotation (*roulement*) and those not authorized to distribute over the week the day's rest. For the first, the law has affected industries by the fact that supplementary hands equal to one-seventh of the number of workmen have to be engaged, as well as additional foremen, in order to insure the necessary surveillance of the work. This burden would in reality have been slight if the men did not demand an increase of wages—obliged to be idle one day in seven, their weekly wage is, of course, diminished in the same proportion.

Two solutions presented themselves to the employers in face of the demands of the men: (1) Raise of the wages one-seventh, that is to say, to the amount paid before the promulgation of the law, and reducing at the same time by one-seventh the number of their workmen, and consequently the output; (2) maintaining the same output by taking on a supplementary force to replace the men at rest, and increasing thus the working expenses by one-seventh. In the majority of cases employers have chosen the latter solution by increasing the number of workmen and maintaining the usual output.

Taking the average wage at 87 cents per day for each workman, the obligation of employing an additional one-seventh of the working staff involves a daily expense of \$12.43.

In the industries not authorized to apply Sunday rest by rotation the effects of the new law have been met by a reduction of one-seventh in the output, or the general expenditures are increased as well as the material in order to attain the normal output before the application of the law.

PROPOSED LABOR LAWS.

In addition to the aforementioned laws, which have taken effect, two others are engaging the attention of the legislative bodies—those which concern maladies resulting from their profession, and workmen's pensions.

The first covers two classes of indemnities in case of sickness:

(1) Compensation applying to the treatment of maladies resulting from certain trades, causing inability to work for thirty days; (2) compensation applying to the treatment of all maladies without distinction, including causes for inability to work not exceeding thirty days. The burden of the first proposition falls entirely on the employer, while the workmen contribute to the second, the employers being responsible only for that portion of the risks resulting from the illness due to the profession, and the workmen supporting the charges resulting from the ordinary sources of sickness. This bill

being, so to speak, a corollary of the law on labor accidents, the charges would be at least doubled.

For the industry in question (employing 100 workmen) the charges would amount to 8 per cent of the wages, or \$6.96 per day, and for three hundred and fifty days, \$2,436.

BILL ON WORKMEN'S PENSIONS.

The bill on workmen's pensions, now being examined by the Senate, is based on the triple obligation of the employer, the workman, and the State to contribute annually the necessary amounts to constitute for every workman or servant of thirty years' service and who has reached 60 years of age, a life pension of 360 francs (\$69.48.) The contribution of the employer is fixed at 2 per cent, that of the workman at a similar amount, while the State makes up the difference, so that the pension, after thirty years, reaches the fixed minimum of \$69.48. The law provides for the capitalization, in the meantime, of these threefold contributions. The daily expenses for the employer (of 100 employees) would be \$1.74, or for three hundred and fifty days, \$609.

From the foregoing study it results that the total annual charges imposed by these labor laws may be divided up as follows: Accidents, \$1,216; weekly rest, \$4,323; illness, \$2,436; pensions, \$609; total, \$8,584, or 4.45 per cent of the capital invested.

Of course the question arises whether the apparent loss in money and output is not compensated for by the gain in health, endurance, and efficiency of the workers.

BRAZIL.

ASSOCIATION OF COMMERCIAL EMPLOYEES AT RIO DE JANEIRO.

The following information relative to the cause of the formation of a Rio de Janeiro association and its aims and objects is furnished by Consul-General George E. Anderson, of that city:

In 1877 there was agitation among employees of commercial houses in Rio de Janeiro for the closing of places of business on Sundays and holidays, the custom at that time being to keep places open every day in the year, unless the proprietors thereof of their own volition decided otherwise. As a result of that agitation there was formed in March, 1880, an association, "The Association of Commercial Employees of Rio de Janeiro." This organization, now numbering 19,473 members, is, in some respects, one of the most notable of its sort anywhere, and embraces some of the most advanced ideas in labor or similar organizations in any part of the world. The organization embraces not only the features common to labor unions the world over, but includes some of those common to a mutual insurance company, a social organization similar to a brotherhood, and an organization protective in other lines. Without any help other than the contributions and fees of its members, it has acquired property free of debt to the value of about \$300,000.

From a social and a municipal-sociological point of view the organization is of inestimable value. Its fine social and diversion rooms attract scores of members every evening; the reading rooms are always occupied, and during the evenings are taxed to their

utmost capacity. The library contains over 12,000 volumes and is frequented by more readers than is the national library in this capital. The professional service at the disposition of the members is of the highest order. It is common for the leading physicians, surgeons, dentists, and lawyers to place a certain number of hours per week at the disposition of the association. A member paying but 90 cents per month may have the services of the best specialists in eye, ear, nose, lung, and other diseases. These same specialists charge from \$50 to \$200 for a consultation ordinarily, and in a city where dental work costs \$10 to \$15 per hour it is no insignificant matter to have a good dentist's services for the cost of materials used. Some of the best legal minds of the capital may be freely consulted by the members during certain hours of the week at the association's offices, and their support may be had before the courts of the land.

So efficient and far-reaching has been the influence of this organization that similar associations have sprung up in all parts of Brazil, and a more or less loose affiliation exists between them. In all, about 40 associations have been organized in as many Brazilian cities.

ERECTION OF WORK PEOPLE'S HOMES IN RIO DE JANEIRO.

The municipality of Rio de Janeiro has constructed and is now preparing to rent 62 groups of houses of two types, some for families and others for single men. These houses, in some respects, are entirely different from the general conception of workingmen's tenant houses. All are constructed of brick and tile covered with plaster, with tile roofs, narrow verandas, small grounds, simple but efficient plumbing, tile floors, and with openings which admit of thorough washing with a minimum of effort and expense. Each group is in appearance a double house of two stories, the lower floors of which are for families and the upper floors for single men.

In type A the lower floors include four rooms, kitchen, bath, toilet, and with outside laundry, according to the prevailing Brazilian style. Each suite has an independent garden. The upper floor of each house is divided into four rooms with a closet and bath, the four rooms being reached independently of the rest of the building by outside stairways to a veranda from which the rooms are entered.

In type B the lower floors include only two rooms with bath, closet, kitchen, and garden, and the upper floors two rooms for single men; otherwise they are built as the type A houses. The kitchens, baths, and closets are tiled with vitrified tile to a height of about 6 feet.

RENTING AND SITUATION OF THE HOUSES.

The manner of renting these houses to tenants has caused considerable discussion, but the plan now adopted is that of leasing all the houses to a middleman who shall answer for them to the municipal government, collecting rent as for his own property, but being subject to the municipality as to the rent charged, the regulations made, and other matters connected with their administration. The municipality will lease the houses free of taxation (real estate taxation in Brazil is on a rental basis) and probably the rent will be on the basis of about 4 per cent per annum on the cost of the houses. What the exact cost of the houses will be is not as yet known, but owing to the cost of labor, materials, and hard-

ware is approximately three times what the same houses would cost in the average American city.

The houses so far constructed are located in three portions of the city. There are six groups of type A and six groups of type B in the Becco do Rio, near the bay front; two groups of type A and nine of type B, as an example or experiment, in the heart of the city away from the water front; and twenty groups of type A and nineteen of type B in the outskirts of the city, having a hillside site. The intention of the municipal authorities is to continue the construction of the houses indefinitely until there is some change in the relation of supply and demand. [Blueprints of the houses may be seen at the Bureau of Manufactures.]

ARGENTINA.

NEW LAW FOR THE PROTECTION OF WOMEN AND CHILDREN.

Consul-General Alban G. Snyder, of Buenos Aires, reports that the working law for the protection of women and children, passed by the Argentine Congress last year, has come into effect.

This law stipulates that women or children shall not work over certain hours in factories and workshops and prescribes conditions for carrying out such work. Children under 16 years of age shall not work over eight hours a day nor more than forty-eight hours a week. Women and children are not to begin work before 6 in the morning nor work after 9 at night, nor are they to be employed in factories where dangerous or unhealthy work is carried on. There are various other rules and regulations, all tending to better the conditions under which women and children work, and various fines are imposed for infractions of the law.

BRITISH INDIA.

SCARCITY OF LABOR AND THE CONSEQUENCES THEREOF.

Consul-General William H. Michael, of Calcutta, reports that for some time there has been a scarcity of laborers in the tea districts and collieries of India, and in May raw jute advanced in price to \$14.60 per bale in consequence of the scarcity of cooly labor at the jute press mills. The coolies went to their homes in the country because of their fear of cholera which prevails to an alarming degree in certain congested centers, notably the coal mines. It is said that the collieries will never be free from cholera until a full supply of filtered water is given to the coolies and better general conditions inaugurated.

JAPAN.

DISTURBED RELATIONS BETWEEN CAPITAL AND LABOR.

Consul Hunter Sharp, of Kobe, transmits a copy of an article which appeared in a local English newspaper concerning the growing friction between capital and labor in Japan and the remedy suggested for its settlement:

The article calls attention to Japan having labor troubles as in other countries, and that a solution of the question can only be solved

by the adoption of a profit-sharing or cooperating system. The other salient points in the article are the following:

There have existed between the Japanese employer and employed peculiarly friendly and sympathetic relations which are never witnessed in Europe and America. So long as Japan conducted her industries on a limited scale as in the past the master-and-servant system worked with excellent effect, but the conditions under which present-day industries are carried on leave no room for the application of the old principle. The latter is essentially based on intimate acquaintance and sympathy between master and servant; but how can this be possible in factories where hundreds and thousands of men and women are employed?

It would be a mistake to think that long hours are really productive. The best method of increasing production is the employment of skilled men at better wages and the restriction of working hours to within reasonable limits.

INTERNATIONAL TRADE UNIONS.

GROWTH OF ORGANIZED LABOR IN GERMANY AND ENGLAND.

The following information concerning international trade unions is furnished by Vice-Consul Walter A. Leonard, of Kehl, Germany:

According to the fourth report of the International Trade Unions, which has recently appeared, thirteen countries are represented, the United States, France, and Russia being the important nations missing from the list. France was formerly included, but, it is said, on account of strike influences, withdrew.

The latest statistics furnished in this report, which are for the year 1906, show that these thirteen countries had 5,851,215 organized workmen, the number of women included being 372,920. Of this total, Germany had 2,215,165 and England 2,106,283 members. That the labor unions are becoming more and more influential in Germany is indicated by the fact that, while England had more organized laborers than Germany in 1905, a year later—*notwithstanding* England's increase—Germany outnumbered it by 108,882. Agricultural laborers are organized in seven of these countries; those in Italy with 71,600 and in Hungary with 24,000 members being the only organizations of importance.

The finances of these organizations are claimed to be given completely and accurately. Their total income in 1906 was reckoned to be 108,283,000 marks (\$25,771,354), while the expenditures are given as 91,360,000 marks (\$21,743,680), and the assets at 150,500,000 marks (\$35,819,000).

The following indicates how the money was expended for benefits to laborers: Support of unemployed, \$3,064,282; sick benefits, \$3,033,026; disabled workmen, \$1,633,086; death losses, \$404,746; traveling expenses, \$235,800; miscellaneous benefits, \$689,598.

Thus \$9,060,538 was paid to workmen for various benefits, and of this England paid \$6,092,800 and Germany \$2,213,400. In amounts paid out on account of strikes and boycotts Germany was far in the lead, expending 15,839,318 marks (\$3,769,758) for that purpose while England expended only \$751,668.

According to Lloyd's Register, the steam tonnage under construction in the United Kingdom on June 30, 1908, aggregated 794,000 and sailing tonnage 799,200, as against 1,236,200 and 1,250,300 tons, respectively, on June 30, 1907. The shrinkage in orders for new bottoms is rather evenly distributed among the builders.

CEYLON RUBBER CULTIVATION.

RUBBER PLANTATIONS DISPLACING TEA FIELDS IN THE ISLAND.

Consul E. A. Creevey, of Colombo, submits the following report, in which he treats of the rapid development of the rubber industry and the ability of Ceylon to compete with Brazil and South Africa:

The cultivation of Para rubber in Ceylon, which dates back to experiments instituted in 1876 at the Government botanic gardens at Heneratgodda, has developed very rapidly within recent years. The acreage is being rapidly increased, the estimate of planting for 1908 being 10,000 acres, while about 120 acres will come into bearing this year.

Although the experiments in growing rubber had been attended with success from the first, the industry was not seriously considered by planters until about ten years ago. Even then the projects were small, and doubtless would have continued so had not the price of tea fallen appreciably, compelling planters to seek another crop as a source of profit. The development of the automobile, with the consequent demand for rubber tires, so enhanced the price of rubber that the Ceylon planters turned to its cultivation with avidity.

The returns for the year 1904 showed 25,000 acres planted, with 600 acres in bearing; for 1905, 40,000 acres planted, with 1,000 in bearing; for 1906, 100,000 acres planted, with 2,000 in bearing, and for 1907, 150,000 acres, with 2,500 in bearing.

The figures named are approximate only, because on many estates tea and rubber are interplanted. Cacao also is interplanted with rubber. The prospect is that if present prices of rubber are maintained, in many instances tea and cacao will be removed from the interplanted areas.

CAPITAL INVESTED, PRICES, AND COMPETITION.

This interplanting of rubber with other plants has the effect of involving the same capital in more than one enterprise, and for that reason the amount of capital invested in rubber cultivation in Ceylon can not be stated accurately. A competent agricultural authority, taking into account the varying ages of the different plantings, estimates that the total of the amounts expended to date on rubber growing in Ceylon is close to \$9,000,000. Likewise it is hard to estimate the working forces engaged in the production of rubber, as many of the superintendents make tea the principal crop, but it is probable that rubber requires the attention and labor of 250 Europeans and between 75,000 and 100,000 Tamil coolies.

Recorded exports of Ceylon grown rubber are: 1904, 35 tons; 1905, 75 tons; 1906, 150 tons; 1907, 397.2 tons; January 1 to May 11, 1908, 113.16 tons. London is the chief market for Ceylon rubber, but exports to Antwerp and New York are growing.

With rubber selling at 84 to 96 cents per pound, the prices most recently quoted, the planter finds a handsome profit in its production. The estimated cost of growing and marketing a pound of Ceylon plantation rubber is between 25 and 30 cents. Labor, the principal factor in determining the cost, is very cheap, the day's wages of the Tamil coolie ranging between 25 and 35 rupee cents (\$0.083 and \$0.1166).

Ceylon planters view with equanimity the great increase in acreage, as they expect that the increased output will be provided for by

the new uses to which rubber is constantly being put. Comparing the cost of production in Ceylon with the cost in Brazil and the Kongo, they maintain that the risks are greater of Brazilian and Kongo rubber falling below the profitable margin, and so leading to a decrease in rubber shipments, than of Ceylon's plantations going out of cultivation through a fall in the price.

CHILEAN TRADE IMPROVES.

BRIGHTER BUSINESS SITUATION IS NOW DEVELOPING.

Reporting that the business outlook in Chile is brighter, Consul Alfred A. Winslow, of Valparaiso, writes:

Confidence is being restored and a much better feeling is noticeable on every hand. The prices of stocks are advancing and the money market is easier, notwithstanding the fact that the Chilean paper peso is only worth about 50 per cent of a gold peso, or about 18½ cents United States gold, instead of 36.5 cents (as originally intended). The internal business of the country is showing much better than at the beginning of the year, but as yet there is not much improvement in imports. Exports have been good so far during 1908, and promise well for the balance of the year. The customs receipts for the first four months of 1908 show a loss of only \$585,294 gold, notwithstanding the fact that duty collected on imports showed a falling off for that period of \$2,541,065. The increase in export duty collected on nitrate and iodine made good the loss on imports.

It is encouraging to note that many more American salesmen and officers and managers of important houses at home are seriously studying the markets of Chile, so as to be ready for business when the rush comes. It is a wise move. Nearly everyone reports a favorable outlook, and nearly all take some orders away with them. Now is the time to get in touch with the business interests of this country, and there is no better way to do it than for one well up in the management of the home plants to make a personal study of the actual conditions. It is a most important means to achieve success.

CHILEAN TRADE NOTES.

The Government has contracted for 10,000 tons of English coal for the state railways at \$6.22 United States gold on board steamer in Talcahuano.

The Government has appropriated 6,000,000 pesos, or \$2,190,000 gold, to be used in building homes for the poor working class. A large portion of it is to be expended in the city of Valparaiso.

The tunnel through the backbone of the Cordilleras that will connect Valparaiso with Buenos Aires is progressing rapidly. Work is pushed day and night. At the present rate of progress it will be opened in 1910.

According to the latest published reports the customs receipts of the Government during 1907 amounted to \$43,681,984 United States gold, of which \$23,304,328 was from imports, \$13,353,480 of that sum being collected at the port of Valparaiso. The export duty on iodine amounted to \$3,985,623.

FOREIGN TRADE OPPORTUNITIES.

[Inquiries in which addresses are omitted are on file at Bureau of Manufactures. In applying for addresses refer to file number.]

Consuls are requested to contribute to this department.

- No. 2492. Proposed port improvements.**—Consul-General W. H. Michael, of Calcutta, India, reports that a plan for the enlargement and improvement of the Calcutta wharf and port for a distance of 6 miles is before the Port Commissioners with a probability of being adopted. For the purpose of carrying out all the improvements contemplated the river-side portion of the Mint premises have to be acquired, and a strip of land along the river frontage will be reclaimed comprising an area of about 10 acres of land, estimated to be worth \$1,000,000. A new road 70 feet wide will be constructed along the edge of the river bank; the lines of the Port Trust Railway will be entirely remodeled, and large transit sheds for accommodating the traffic will be erected. The whole scheme comprises the following provisions: (1) Twelve commodious pontoon landing stages. (2) Seventeen two-storied warehouses with a total floor area of 1,217,150 square feet. (3) The length of the depot will be about 5,000 feet, the greatest breadth about 520 feet, and the total area comprised in the station and roads about 4½ acres. (4) Building sites with a frontage on Strand Road of 3,000 linear feet and 6 acres superficial area. These improvements when completed will afford splendid facilities for handling the rapidly increasing trade.
- No. 2493. American goods of various kinds.**—A report has been received from an American consul in a country of eastern Europe, in which he states that a firm of commission merchants doing a large business in his district would like to represent American manufacturers of the following classes of goods: Leather, hardware, saws, cork, wood alcohol, wax, typewriters, turpentine, novelties, printing machines, steel, smoked fish, etc. The firm is willing to furnish satisfactory references.
- No. 2494. Panama Canal supplies.**—Bids will be received until August 13, 1908, by the Isthmian Canal Commission, Washington, D. C., for the supply of locomotives and dump cars. Proposals for the foregoing articles must be submitted in triplicate. (Circular No. 458.)
- No. 2495. Steel lighters.**—An American consul in a city of Latin America reports that a construction firm in his district would be glad to receive quotations from builders of steel lighters. This company is about to purchase a steel lighter of 100 tons capacity, destined for the handling of rock and heavy material. The lighter must be solidly constructed, and all necessary equipment, such as anchors, etc., should be included in the quotations furnished. Illustrations, diagrams, terms and conditions of sale, and full particulars with prices c. i. f. certain port should be sent to the company in question. Correspondence should be conducted in Spanish.
- No. 2496. American bauxite.**—A New York house advises the Bureau of Manufactures that it desires to correspond with firms in a position to supply large quantities of American bauxite.
- No. 2497. Office supplies.**—An American consul in an European city reports that there is a good demand in that region for office supplies of all kinds, and forwards the name of a merchant who desires to communicate with American manufacturers of fountain pens, stationery, office sundries, and novelties of all kinds. He is willing to furnish banking reference.
- No. 2498. Calculating machines.**—A merchant doing an extensive business in a Latin-American city has advised an American consul that he would like to receive catalogues, prices, and terms of sale from manufacturers of calculating machines devised for use in banks and government offices. Correspondence can be conducted in English.
- No. 2499. Timber and pulpwood.**—A report has been received from an American consul located in a Canadian city, stating that a business man in his district advises him that he has a number of timber and pulpwood tracts for sale, and would like to be put in touch with American firms interested in the same.
- No. 2500. Agricultural implements and machinery.**—A Russian business man advises an American consul that there is a good market in the region in which he is located for agricultural implements and machinery, and he would like to communicate with American firms with a view to acting as agent for this line of goods in that territory.

GARDENING IN ENGLAND.

INTRODUCTION OF THE FRENCH SYSTEM—A TEXT-BOOK PUBLISHED.

Consul-General Robert J. Wynne, of London, states that the condensed statement in Daily Consular and Trade Reports of June 6, concerning a newspaper account of the successful and marvelously profitable introduction of French intensive vegetable gardening methods in England has brought numerous inquiries from the United States for further particulars. He therefore writes:

It has been found necessary, in order to meet the general demand for information on the subject in England, to publish a text-book by C. D. McKay, F. R. H. S., which may be procured by sending a 25-cent money order to the Daily Mail office, London, which will cover the price of the work and the cost of wrapping and mailing. Mr. McKay, it is said, may be regarded as the founder of the French garden in England, since he first persuaded English gardeners to go over to France to see for themselves the wonders of cultivation which they would not believe on hearsay.

CONSULAR AND TRADE NOTES.

Consul Edwin S. Cunningham writes that in Durban the jinricksha is passing into disuse since the establishment of the excellent system of street railways in that South African city.

The British consul at Copenhagen states that tenders invited by the Danish Government are generally for coals, cast-iron and lead pipes, iron rails, and electric appliances. Otherwise almost all other articles used by the Government (especially by the army and navy) are produced in the country, or are at least supplied by local dealers.

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DAILY CONSULAR and TRADE REPORTS

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TOBACCO INDUSTRY.

BELGIUM.

HOME-GROWN AND FOREIGN TOBACCO TRADE.

The following information concerning the tobacco trade of Belgium is furnished by Consul-General Ethelbert Watts, of Brussels:

Between 5,000 and 6,700 acres of tobacco are cultivated in Belgium, chiefly in East and West Flanders and Hainaut. The number of plants raised in 1905, 1906, and 1907 was 162,784,100, 147,659,636, and 143,518,662, respectively, and the yield was 23,533,120, 20,927,359, and 19,476,206 pounds, respectively. The average cost of production is estimated at from \$314 to \$320 per hectare (2.471 acres), and the average yield 5,500 to 6,600 pounds per hectare.

Sales generally take place in December and January for middle-sized leaves, and in February and March for large leaves. The industry receives no aid from the Government. There is an excise tax of 15 francs (\$2.90) per 220 pounds on all tobacco except that which is raised for the personal use of the planter, which is free from tax. On all tobacco exported the tax is refunded. There are about 616 tobacco factories in the Kingdom, employing from 9,700 to 9,800 persons.

IMPORTS FOR THREE YEARS.

The following statement shows the imports into Belgium of tobacco and tobacco manufactures from the principal countries in 1905, 1906, and 1907 (entered for consumption):

Whence imported.	1905.	1906.	1907.
UNMANUFACTURED, STEMMED.			
	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>
United States.....	223,192	192,636	162,990
Philippines.....	59,785	101,374	111,338
Netherlands.....	68,378	99,134	101,503
All other countries.....	52,224	55,496	42,768
Total.....	403,579	448,639	408,599
ALL OTHER UNMANUFACTURED.			
United States.....	10,315,848	8,079,192	6,096,874
Netherlands.....	6,996,938	7,411,167	7,881,646
Dutch Indies.....	462,727	1,068,294	1,337,211
Bremen.....	1,314,464	1,184,480	994,987
Germany.....	442,209	518,066	563,476
Hamburg.....	471,079	517,561	443,626
Philippines.....	100,302	228,633	445,744
Austria-Hungary.....	244,266	199,518	810,478
Russia.....	10,463	209,121	306,131

Whence imported.	1905.	1906.	1907.
ALL OTHER UNMANUFACTURED—continued.	Pounds.	Pounds.	Pounds.
Turkey	539,087	434,702	264,517
England	143,887	241,501	252,644
All other countries	661,358	595,996	793,659
Total	21,691,628	20,658,221	19,678,988
CIGARS AND CIGARETTES.			
United States	20,087	18,570	12,222
France	42,009	41,402	58,340
Netherlands	25,874	29,247	27,621
Germany	28,215	80,978	27,172
England	9,535	10,340	17,461
Egypt	13,682	18,262	12,428
Hamburg	6,531	5,973	6,238
Russia	2,317	2,416	3,069
Cuba	1,932	1,692	920
All other countries	4,293	4,756	4,474
Total	154,425	168,636	169,935
CUT, SMOKING, AND SNUFF.			
United States	18,128	24,757	26,737
Algeria	36,120	38,827	59,624
France	30,692	42,277	25,216
Netherlands	26,633	26,635	23,399
England	1,260	1,947	8,598
Germany	3,881	4,134	4,814
Hamburg	19,859	12,302	2,497
All other countries	6,509	3,859	6,064
Total	143,082	149,788	156,939

The tobacco which is replacing the American product in Belgium is Java and Hungarian, chiefly.

EXPORTS.

The exports of unmanufactured tobacco, other than stemmed, amounted to 114,292 pounds in 1907, exported to Germany and the Netherlands chiefly.

The exports of cigars and cigarettes during the years 1905, 1906, and 1907 were as follows:

Countries to which exported.	1905.	1906.	1907.
	Pounds.	Pounds.	Pounds.
England	72,094	68,965	77,381
Germany	31,132	29,594	38,379
Argentina	13,894	20,042	26,638
Portugal	9,987	12,019	20,913
France	18,526	19,518	19,886
China	31,335	25,111	13,604
Denmark	9,678	13,582	12,991
Netherlands	5,124	10,699	12,667
Australia	9,506	10,663	10,256
Turkey	3,716	9,852	9,711
Kongo Free State	3,214	5,542	8,122
Norway	5,669	5,383	6,461
Egypt	5,896	4,774	6,021
Switzerland	14,064	5,865	5,874
Chile	1,758	3,421	4,634
All other countries	38,188	39,929	30,196
Total	273,771	280,859	308,411

The exports of cut and smoking tobacco in 1907 amounted to 17,341 pounds, which went to the Kongo Free State, France, Germany, Netherlands, etc.

DUTIES AND PRICES.

The following are the duties on tobaccos imported into Belgium: Unmanufactured: Stemmed, \$14.47 per 220 pounds; all other than

stemmed, \$10.61 per 220 pounds. Cigars and cigarettes, \$115.80 per 220 pounds; other manufactures, including smoking and cut tobacco and snuff, \$23.16 per 220 pounds. All foreign unmanufactured tobaccos are also subjected to an excise duty of \$2.89 per 220 pounds.

The following are the average prices of the principal tobaccos in bond, per 220 pounds: Java, \$11.58; Hungarian, \$12.54; Santo Domingo, \$12.54; Turkish, \$13.31; Argentine, \$14.47; Brazilian, \$16.40; American tobacco, for cigars, \$36.37 to \$40.50; Belgian tobacco, \$14.47 to \$21.23.

The usual terms of payment for American tobacco are at sixty days, and for the other tobaccos, cash on delivery.

STATUS OF AMERICAN LEAF.

DECREASE IN THE CONSUMPTION DUE TO HIGH PRICES.

Consul-General Henry W. Diederich, of Antwerp, furnishes the following information concerning the decrease in the consumption of American tobacco in Belgium and the causes thereof:

In 1906 the United States was the largest shipper of tobacco to Belgium, but in 1907 the Dutch were the largest shippers thereto. This was caused by the high price of American tobacco, which has injured the product in the Belgian market to a very great degree.

Smoking tobacco is a popular commodity in Belgium. It retails at 10 centimes per 50 grams, which is somewhat less than 1 cent per ounce. Owing to the duty on leaf tobacco, the Belgian manufacturer can not work tobacco that costs him from 8 to 10 cents in the United States. The immediate consequence of the high prices in the United States has therefore been that Belgian manufacturers look to the home-grown tobacco, which they mix with low grades of imported kinds. In this way they produce a manufactured article that makes a good appearance, is very cheap, and to which smokers and chewers have become well accustomed.

LOSS OF AMERICAN TRADE.

There was a time when the United States also supplied the greater part of tobacco used for manufacturing purposes in Belgium. Now it is being used less and less, and for certain kinds of manufactured tobacco it has been discarded entirely. At the present time, for instance, not a single hogshead of "spinners" is imported for consumption in Belgium, all of the spun tobacco being made from the domestic leaf. Less than ten years ago, little or no home-grown tobacco was used for that purpose. Belgians have now become accustomed to the change, and there seems no chance that Belgian tobacco spinners will again revert to American tobacco. Those who are familiar with the tobacco trade here claim that American planters are themselves to blame for this. They lose sight of the fact that the trade wants not only sound, but cheap goods, and that by driving prices too high they merely invite competition in all the tobacco markets.

Tobacco merchants say that the growers of American burley, by forcing prices too high, compel the manufacturers to seek for cheaper grades, and thus give other countries an opportunity to produce tobacco at more favorable prices. It is true the trade is used to burley tobacco, which is popular with consumers, but the planters must not forget that manufacturers, by gradually blending with

other tobaccos or by forcing the sale of other grades, may reduce the consumption of American burley and thus decrease also the demand for this article. Europe was at one time a very great consumer of burleys, but since the prices were forced up, their consumption has gradually and greatly diminished.

The law of April 18, 1896, granting exemption from the revenue to farmers planting a limited quantity for their own use, has been a further check to foreign tobacco. It is estimated that 6,000 tons of native-grown tobacco thus annually escape revenue taxation. These 6,000 tons of tobacco are manufactured and sold in Belgium in direct competition with the product of those manufacturers who pay revenue and license. It can thus be readily seen what an effect this condition of things must have upon the importation of American tobaccos.

FRANCE.

THE AMERICAN PRODUCT MORE THAN ONE-HALF THE TOTAL IMPORTS.

In furnishing the following information concerning American tobacco in France, Consul Alphonse Gaulin, of Havre, does not think that increased prices of the product would materially affect the imports into France:

The imports of leaf tobacco into France generally exceed the domestic production, and the United States furnishes more than half of these imports.

The inquiry as to whether an increase of from 20 to 30 per cent in the price of American tobacco would bring about a rapid increase in the substitution of tobacco grown in other countries may safely be answered in the negative. The quantity of tobacco purchased in the United States varies somewhat with the prices ruling in the American market, and large stocks are constituted when these prices are relatively low; but on the whole the quantity consumed has been constantly increasing. It is probable that even an increase of 50 per cent would not materially affect the imports of American tobacco into France.

In this connection the following statement, showing the average prices paid by the French Government for various grades of tobacco per 100 kilos (220.46 pounds), may throw some light on the question:

Description.	1898.	1901.	1903.	1904.	1905.	1906.
Kentucky.....	\$22.91	\$23.39	\$20.60	\$16.83	\$15.36	\$17.48
Maryland.....	25.49	24.00	32.96	20.36	19.37	20.09
Ohio.....	21.59	22.16	23.43	21.86	19.06	18.98
Virginia.....	11.11	14.46	16.17	13.61	14.27	15.56
Brazilian (ordinary).....	56.66	34.25	21.12	21.41	21.26	23.67
Hungarian.....		17.27	15.97	16.26	15.98	16.02

The prices paid for Habana, Java, Sumatra, and Levant tobacco were, of course, much higher, and need not be considered here for the purpose of this report. Abnormal prices would undoubtedly stimulate competition and reduce the consumption of American tobacco, but it can not be said that it would be an easy matter to find satisfactory substitutes.

The only foreign products which compete at all with American tobacco (leaving out of consideration the higher priced tobaccos which are used for another class of goods) are the Brazilian and Hungarian tobaccos. Brazilian tobacco is already much more expensive than the American article, and while the Hungarian tobacco is somewhat cheaper it could not, by itself, give entire satisfaction.

COMPETITION FROM FRENCH TOBACCO.

As to French tobacco, it can be produced sufficiently to supply the needs of the country, but its quality is not quite what the consumers require. It contains too large a percentage of nicotine and must be blended with milder products. This fact is fully recognized by the Government, which limits the planting on French soil to four-fifths of the probable annual consumption. The quality may be considerably improved in time, but in view of the results already obtained it is doubtful whether any tobacco rivaling the American product will ever be grown in this country.

On the other hand, it is claimed that Algeria may become a serious competitor, and French officials have pointed out that successful experiments have been made in that colony with American seeds, such as the Carolina yellow, yellow prior, and with South American varieties. The officials contend that a too high level of prices in the United States would certainly induce Algerian planters to further exertions and experiments along those lines, and they are convinced that, as a result, a large proportion of imports would eventually be dispensed with. But whether this contention is well founded or not it is clear that the danger, if any, lies in the distant future.

It may be added that the education of the popular taste to new mixtures would probably take a long term of years. This is especially true in a country like France, where, owing to the State monopoly, the smokers have become habituated to a few brands which have not varied to any perceptible extent for years. The State has found it more profitable to limit the number of brands offered to the consumers, but it has thereby correspondingly increased the difficulty it would experience if it attempted to introduce new mixtures among its millions of customers.

ITALY.

AMERICAN THE PRINCIPAL FOREIGN TOBACCO CONSUMED.

The following information concerning the tobacco industry of Italy is furnished by Consul-General Hector de Castro, of Rome:

The tobacco business in Italy is a Government monopoly, and most of the product used in the Government factories is imported—to a very large extent from the United States.

The income of the Italian tobacco monopoly, which in 1897 was about \$38,000,000, reached in 1904-5 a total of over \$46,000,000, against a total expense of \$11,086,000, leaving for that year a profit of \$34,814,000 to the Government.

The cultivation of tobacco in Italy is subject to so many rules and regulations that it is not generally carried on. Permission to cultivate tobacco must be obtained from the Government, and the cultivation is under the control of the excise office. The tobacco so grown

must be either sold to the Government, at an appraised price or exported within three years.

The tobacco produced in Italy was, in 1904, 5,798 tons, valued at \$785,000, and in 1905, 6,739 tons, valued at \$963,256.

Italy is not yet and will not for years, if at all, be in condition to produce the tobaccos required for the monopoly, and must depend upon the United States for the larger part of its supplies entering into the manufacture of its most popular brands of cigars. Even though the price of American tobaccos may increase, it could not materially affect the revenue of this monopoly, there being no competition to meet.

IMPORTS AND PRICES.

During the year 1905-6 the Government imported 17,069.53 tons of tobacco, valued at \$4,210,000, of which 14,681.50 tons, valued at \$3,390,000, were imported from the United States, 1,415.24 tons, valued at \$623,000, from the Levant, and the balance, 972.79 tons, valued at \$197,000, from all other countries.

The tobacco imported from the United States was composed as follows: Kentucky leaf for cigars, 11,539 tons, and Kentucky lugs, 730 tons; Virginia leaf for cigars, 2,055 tons, and Virginia bright, 242 tons; Maryland, 115.50 tons; total, 14,681.50 tons.

The Government paid an average of \$143 per ton for leaf grown in Italy, while the average cost of American tobacco was as follows, per ton: Kentucky leaf, \$216 in 1904-5 and \$227 in 1905-6; Virginia leaf, \$240 in 1904-5 and \$292 in 1905-6.

The acquisitions of tobaccos for the Italian monopoly are made in the United States directly by the Government agents stationed at New York. The monopoly exports an especially cheap and strong cigar called "Toscano," made wholly out of Kentucky leaf, the exports of which amounted in 1904 to 267 tons, valued at \$354,000, and in 1905 to 409 tons, valued at \$557,000. Four-fifths of these exports go to the Argentine Republic.

SWITZERLAND.

SWISS CULTIVATION AND IMPORTS AND EXPORTS OF TOBACCO.

The following information concerning the consumption of tobacco in Switzerland and the standing of American versus other tobacco in that market is furnished by Consul-General Silas C. McFarland, of St. Gall:

Owing to altitude, soil, and climate, the attempt to grow tobacco in Switzerland has been largely experimental, confined to a few of the most suitable districts, and not important as affecting the tobacco industry as a whole. About ten years ago original experiments began in the cantons of Waadt, Thurgau, and Valais. Since then, notwithstanding the value of the land for other purposes, there has been some progress, but the best results have produced only a small-leaved plant, suitable for the cheap grades of smoking tobacco in common use, and in no wise affecting cigar manufacture. Switzerland is, and must continue to be, an importer of both raw and manufactured tobacco, the consumption increasing from year to year. The manufacture, conducted chiefly in the cantons of Basel, Aargau,

Valais, Waadt, and Zug, and given protection by increasing tariffs against the importation of foreign goods, has steadily grown in importance, but the raw tobacco so utilized is, excepting as above stated, imported.

IMPORTS AND EXPORTS.

Swiss tobacco statistics are not uniform in arrangement, and detailed comparisons are therefore impossible, but imports and exports for the years 1906 and 1907 are herewith given, details of the minor products not being available for the latter year:

Description.	Imports.		Exports.	
	1906.	1907.	1906.	1907.
Leaf and stems.....	\$1,703,504	2,074,804	\$4,413	\$202
Cigars and cigarettes.....	382,231	478,772	484,881	562,347
Smoking, chewing, and snuff.....	63,010	.....	11,606	.....
Extracts and miscellaneous.....	2,433	.....	168,862	.....
Total.....	2,151,178	2,548,576	669,762	562,549

The following statement shows the imports of leaf tobacco into Switzerland from the several countries in 1906, the latest year for which statistics are available:

Countries.	Value.	Countries.	Value.
United States.....	\$861,969	Italy.....	\$2,563
Dutch Indies.....	443,877	Netherlands.....	4,091
Brazil.....	177,988	Russia.....	2,216
Other South American States.....	15,641	Greece.....	2,890
Central America.....	56,779	Philippines.....	1,887
Mexico.....	16,308	British India.....	2,640
Austria-Hungary.....	43,693	Australasia.....	257
European Turkey.....	33,585	All other countries.....	1,130
Asiatic Turkey.....	13,106		
Algeria-Tunis.....	18,576	Total.....	1,708,504
Germany.....	4,479		

Swiss import figures as applying to the United States and Cuba are not reliable indexes, for the reason that large quantities of American and Cuban tobacco arrives in Switzerland through German, French, and other ports, and are accredited to other countries.

AMERICAN TOBACCO IN SWITZERLAND.

Experts unite in the opinion that each succeeding year will develop an increasing competition with American tobacco, especially in tobaccos from the Dutch colonies of the East, from Brazil and South America generally, Mexico, Turkey, and possibly from the Philippines. This competition would be emphasized by any material increase in the price of American leaf.

While American leaf is largely used both by Swiss manufacturers and those of Germany and surrounding countries, whose finished goods show most prominently in the statistics, cigars made in the United States, excepting Key West, are not in favor, due both to price and flavor. Cuban-made cigars are the standard, and although retailed cheaper than in the United States, are sold only to the high-class trade. Cost also figures against Mexican and Brazilian cigars, although there is an increasing import of both. The average "smoke" in Switzerland is a 10-centime or a 2-cent cigar, manufactured it may be in Switzerland, in Germany or Austria or in Hol-

land or Belgium, but largely of cheap American or Cuban tobacco, mixed with colonial. Owing to the small labor cost of manufacture and ingenious use of materials, a fairly good cigar can be bought for 1 cent, and from that price to 10 cents and upward for the finest Habanas.

RUSSIA.

CULTIVATION AND CONSUMPTION OF TOBACCO IN THE EMPIRE.

The following information concerning the tobacco industry of the Russian Empire is supplied by Vice-Consul-General William Dawson, jr., of St. Petersburg:

Tobacco has been successfully cultivated in the southern districts of Russia for a long period, and a leaf of excellent quality is obtained. In 1903 there were about 175,000 acres in tobacco, yielding approximately 100,000 tons. The cultivation is limited to southern Russia, the Caucasus, and Turkestan, the following provinces producing nine-tenths of the total output: Chernigov, Kuban, Poltava, Tambov, Kutais, Taurida, Bessarabia, Samar, and Voronezh. The raising of tobacco is not encouraged by the Russian Government except in the measure that farming of every kind is fostered by the ministry of agriculture.

IMPORTS AND EXPORTS.

It is impossible to determine just what are the exports and imports of leaf tobacco, as custom-house statistics generally group tobacco, cigars, and cigarettes under one head. Imports and exports for the last six years have been as follows, according to customs grouping:

Year.	Imports of tobacco, cigars, and cigarettes.		Exports of cigarettes and tobacco.	
	Pounds.	Value.	Pounds.	Value.
1902	1,584,000	\$1,289,800	9,596,000	\$680,800
1903	1,404,000	1,158,200	12,636,000	960,000
1904	1,188,000	1,070,700	12,816,000	921,300
1905	1,224,000	1,049,600	16,308,000	868,800
1906	1,368,000	1,102,600	18,972,000	1,329,700
1907	1,152,000	969,300	14,472,000	688,400

During 1907, 294,000,000 cigarettes were sent abroad, representing a value of \$888,935.

Custom-house statistics offer no information as to the countries with which the tobacco trade is carried on, although it is understood that practically all of the leaf tobacco imported comes from Turkey. It appears that practically no American leaf tobacco is consumed in Russia, although cigars are, of course, imported. Manufacturers maintain that the American plant gives a coarser leaf than does the native, and attribute to that fact the unpopularity of American tobacco in Russia.

TOBACCO CONSUMED, PRICES, AND DUTY.

Most of the tobacco consumed in Russia is in the form of cigarettes, which are either purchased ready-made or put together by the smoker. Pipe smokers, of whom there are comparatively few, usually smoke

the same sort of tobacco sold for the manufacture of cigarettes. This is a light, finely shredded article, with an agreeable, although not very strong, flavor. Cigars are little used, and in most cases the Cuban is preferred to the Russian make, which has less taste. The chewing of tobacco is almost exclusively confined to sailors. Except in the case of the coarsest grades, Russian tobacco is very carefully prepared, only the choicest leaves are used, and all extraneous matter, such as sticks and bits of paper, is carefully excluded. The Government levies an excise duty of 30 per cent of the price of sale on all tobacco, cigarettes, cigars, etc., manufactured in Russia. It is estimated that the revenue drawn from this source during the present year will amount to \$26,555,460, indicating a total consumption of nearly \$90,000,00.

The price of the Russian leaf, as it is delivered to the manufacturer, varies from \$5 to \$25 per pood (36 pounds), according to the quality and the abundance of the crop. Foreign leaf tobacco imported into Russia pays a duty of \$17.84 per pood. No pronounced effort is being made to increase the exports of Russian tobacco.

RUSSIAN TOBACCO INDUSTRY.

A local journal of recent date gives the following statistics of the tobacco industry of Russia:

Tobacco raising, and especially the cultivation of higher grades, has hardly attained a developed state, and Russia is obliged to import a certain amount of superior tobacco to used in mixtures. About 1,260,000 pounds, worth approximately \$1,030,000, are imported every year (in 1905, 1,360,800 pounds worth \$1,096,950). Russia produces annually 216,000,000 pounds of tobacco (in 1906 the yield was only 161,460,000 pounds). Of the total crop, about 144,000,000 pounds are so-called mahorka (tobacco of an inferior quality). Russian factories consume approximately 54,000,000 pounds of native and from 1,188,000 to 1,260,000 pounds of foreign leaf. The products of this industry, especially those of inferior quality, find a fair market abroad. The value of foreign leaf imported is about 65 cents per pound, whereas native tobacco sent abroad is worth only about a tenth of that sum.

The production of cigarettes, particularly of cigarettes of second quality, is on the increase. In all, 12 billions of cigarettes are made every year, of which 9 billions are of second quality. About 370,000,000 are exported and the balance consumed in Russia.

Certain discrepancies are to be noted in the foregoing extract. In the first place, the value of 65 cents per pound, quoted for foreign leaf imported, hardly concords with the statement that about 1,260,000 pounds, worth \$1,030,000, are annually brought in, which would indicate the value of imported tobacco to be about 80 cents per pound. As regards the quality of the Russian leaf, a considerable difference of opinion seems to prevail between the foregoing article and the dealers whose names are forwarded. [Addresses filed in Bureau of Manufactures.] This may perhaps be explained by the fact that the writer of the newspaper article was comparing the native product to the high-grade Turkish leaf (which seems to be about the only tobacco imported), whereas, from the nature of my questions, the dealers had in view the American article, which is generally conceded to be of a coarser grain. [The vice-consul-general transmitted a printed copy, in French, of a pamphlet issued in 1906 by the department of agriculture relating to the tobacco industry of Russia, which is on file in the Bureau of Manufactures.]

GERMANY.**AMERICAN TOBACCO POPULAR AT HAMBURG.**

Consul-General Hugh Pitcairn furnishes the following information concerning the imports of tobacco at Hamburg:

For many years Germany, particularly through Hamburg, has been a large importer of tobacco from the United States, such as is designated Virginia, Ohio, Maryland, burley, seed leaf, etc. These tobaccos are very popular here and there is always a large demand for them.

From 1897 to 1907 the imports of American tobacco have gradually increased. Although seed leaf tobacco has somewhat decreased in its imports since 1904, the decline is merely due to the advance in the prices of this article in the course of the last few years.

While Germany is producing tobacco, it can not be said that the Government is encouraging its production with a view of using the domestic article in substitution of American tobacco, and the industry is not receiving any governmental aid. Of German tobacco there is scarcely any exported to foreign countries, so that it can be said that the official statistics of exports of tobacco from Hamburg are actually figures representing reexported shipments.

There is, so far, no other tobacco substituted here for the American product, and the latter will always remain popular and in demand as long as the prices range within a reasonable limit.

BRITISH INDIA.**IMPORTS OF RAW AND MANUFACTURED TOBACCOS.**

In reporting that in 1907-1908 India imported 1,224,818 pounds of unmanufactured tobacco, which was valued at \$212,036, an increase of \$13,330 over the previous year, Consul-General William H. Michael, of Calcutta, gives the following further tobacco trade details:

The imports of cigars amounted to 117,554 pounds, valued at \$145,397. A limited amount of tobacco, raised in Virginia, and a few Key West cigars were imported from the United States, and some tobacco and cigars were imported from Cuba. The importation of cigarettes is increasing, notwithstanding a number of cigarette factories have been started in India during the last two years. The imports of cigarettes in 1907-1908 amounted to 3,634,192 pounds, valued at \$2,039,920, against 2,912,341 pounds in 1906-1907, valued at \$1,532,454. The Government report does not give the country of origin. It is generally understood, however, that the bulk of cigarette imports come from the United States, which are cheap, attractive, of good "bouquet," and nicely put up. Egypt comes next, but her cheaper class of cigarettes are not to be compared, in point of attractiveness, to the American article.

India exhibited at the exposition held in Calcutta last year a great variety of home-made cigarettes, but the best and highest priced shown were inferior to the cheapest cigarettes imported from the United States. Indian manufacturers of cigarettes are improving their machinery and "style" and will no doubt in time be able to make a presentable cigarette. Europeans living in India, however, seldom use native-made cigarettes.

TARIFF NOTES.

MEXICO.

INCREASES OF DUTY ON SEVERAL ARTICLES.

The Diario Oficial of June 16 contains a decree of the President of the Republic promulgating the following changes in the Mexican tariff: The removal of duty on benzol, provided for under tariff No. 278A, took effect July 1; the other changes of duty will go into force on August 16 next. (A peso equals 49.8 cents United States currency.)

Tariff No.	Articles.	Rate of duty.	
		New.	Old.
		<i>Pesos.</i>	<i>Pesos.</i>
176	Tobacco, plug, for chewing.....	1.70	1.10
228	Steel in bars, round, square, flat, channel, in an octagonal section, or cruciform.....	6.00	5.50
228 A	Steel in bars, of all forms and sections, with designs, channels, indentations, or wrought in symmetrical designs on its entire surface, or only part thereof.....	7.00	5.50
241 A	Iron in bars, of all forms and sections, with designs, channels, indentations, or wrought in symmetrical designs on its entire surface, or only part thereof.....	7.00	6.00
248	Rails of iron and steel for railways, and switches ^a , disks ^b , sleepers, and frogs ^b	2.50	2.00
249	Screws, bed-plates, attachments and bolts, of iron or steel for attaching rails.....	.08	.01
250	Beams and joists of iron or steel, when not specially perforated or slotted.....	3.50	3.00
251	Beams, joists, and columns of iron or steel, when specially perforated or slotted; frames, brackets, base plates for columns, butt or connecting plates, braces or tie beams, with or without nuts, and other parts, not specially mentioned, of iron or steel, for construction purposes.....	.05	.04
268	Common and hydraulic lime, Roman or Portland cement, and carbonate of lime or Spanish white.....	.70	.55
278 A	Benzol.....	Free.	.09
368	Ready-made clothing, not specially mentioned, and separate parts thereof, when sewn, of cotton fabrics of all kinds and textures, even ornamented with lace or embroidery, of cotton or linen, or common metal, for adults and children.....	2.75	2.75
369	Do., when ornamented with ribbons or tissue containing silk, or with skirts or overskirts of lace or point of cotton.....	3.30	3.30
527	Absorbent cotton and gauze (even when sterilized or prepared with antiseptics).....	.25	.25
557	Common salt, granulated or in blocks.....	.02	.02
557 A	Common salt, ground for table use (even when imported in cotton bags).....	.03	.02
680	Carriages, skeleton, not upholstered or painted, weighing up to 250 kilos.....	.45	.83
681	Do., weighing more than 250 kilos and not exceeding 750 kilos.....	.33	.22
	(The duty on the first 250 kilos of each vehicle shall be 0.45 peso per kilo, and each additional kilo, up to the limit specified, shall pay 0.33 peso.)		
684	Running gear (front or rear, and separate parts thereof not specially mentioned), poles and shafts of wood or of wood and common metal, and wheels for wagons or carriages; all these painted or varnished.....	.66	.80
634 A	Running gear (front or rear, and separate parts thereof not specially mentioned), poles and shafts of wood or of wood and common metal, and wheels, not painted, for wagons or carriages, neither painted nor varnished.....	.45	.80

* The old duty was 1 peso per 100 kilos on rails weighing not more than 10 kilos per lineal meter and 2 pesos on those weighing more than 10 kilos.

^b The old duty was 1 peso per 100 kilos.

* Only the classification has been changed in this case, the rate remaining the same.

MOROCCO.

NEW WAREHOUSE TAXES.

Consul-General F. D. Hill, writing from Barcelona, Spain, transmits the substance of a new law which went into effect June 15 last, establishing a tax on all merchandise landed and stored at Moroccan

ports, whether for import or export. The provisions of the law are as follows:

Goods remaining in warehouse for a longer period than twenty days are to be subject to a tax of two-fifths of a Moroccan dollar (about 30 cents) per 100 kilos (220 pounds) per month.

Postal packets and samples of no commercial value are exempt from the payment of the tax.

Explosives will commence to be subject to the payment of the tax after the expiration of five days from being disembarked.

Coal, charcoal, lumber, marble, bricks, tiles, casks, empty boxes, and all unmanufactured articles, barrels, etc., will not be stored inside the warehouses, but will nevertheless be taxed at the rate of one-fifth Moroccan dollar (about 15 cents) for 100 kilos (220 pounds) of merchandise per month.

Cereals and forage will be permitted to remain on the wharf for not more than forty-eight hours.

No merchandise will be permitted to remain in the warehouses longer than six months. Upon the expiration of this term the proprietors will be notified that the merchandise will be sold thirty days after the date of such notification, unless removed. The proceeds of the sale, after deducting the amount of the duty and expenses, will be held at the disposal of the interested party.

DOMINICAN REPUBLIC.

REDUCTION OF SHIPPING AND TONNAGE DUES.

Minister F. R. McCreery, of Santo Domingo, transmits a translation of a new law, which went into effect on July 1 last, reducing shipping duties as follows:

Description.	New rate.	Old rate.
Tonnage dues (for sailing vessels or steamers):		
Per ton of cargo entered.....	\$0.50	\$2.00
Per ton of cargo cleared.....	.50	2.00
Pilotage: ^a		
Sailing vessels, per registered ton.....	.01	.01
Steamers, per registered ton.....	.005	.01
Privilege of entry, per registered ton.....	No charge.	.02
Anchorage, per registered ton.....	No charge.	.02
Charge for interpreter service.....	2.00	4.00
Charge for signaling service.....	2.00	4.00
Charge for sanitary service.....	2.00	4.00
Water, for each hoghead taken.....		1.00
Gangway, when in use, per day.....	No charge.	2.00

^a Pilotage fees are charged both on entering and clearing.

Preserving Fish in Paper.

Consular Clerk Milton B. Kirk sends a Paris newspaper note calling attention to some interesting experiments in connection with the carriage of fish recently made by M. Alfred Goldès, president of the fishery section of the Brussels Chamber of Commerce. Soles caught by Ostend boats off the Portuguese coast which were packed in a special vegetable paper and turned out after sixteen days in much better condition, both as regards freshness and flavor, than those packed in ice. This paper was recommended at the Ostend Fishery Congress of 1907 by Herr Sölling, inspector of Danish fisheries. It costs little and takes up but small space.

AUSTRALIAN STATE INSURANCE.

PROVISION BEING MADE FOR SAFEGUARDING WORKINGMEN'S HOMES.

Consul-General John P. Bray, of Melbourne, reports that the government of the Australian State of Victoria is about to undertake the experiment of State insurance in connection with the houses of settlers, which the government has erected on a scheme by which repayments by the occupants are extended over long periods.

It is estimated that the settlers will have to pay to the government for the State insurance of the houses what is equal to an annual premium of not much more than one-fourth per cent upon the value of the property, whereas if companies did the insuring the men would—according to departmental estimates—have to pay at the rate of between one-half per cent and 1 per cent. The government has already accepted the responsibility for the 250 houses which have either been erected or are being built. The houses are wooden, and many of them are situated in localities where the fire-fighting machinery is not of the most modern type. The companies offered to insure the places at premiums varying from \$2.55 to \$4.25, allowing 10 per cent discount. This would have cost the 250 settlers the price of about two houses a year.

The government programme provides for the building of 500 new houses within the next two years. This will bring the total number up to 750 houses. According to the departmental estimates, if the government were to accept the insurance companies' terms it would cover the cost of six houses a year in insuring this number. The government hopes instead to charge the settlers less than would the companies, yet establish a substantial fund from which to meet all losses.

GERMAN COOPERATIVE SOCIETIES.

PROFITS AND VAST EXTENT OF RETAIL BUYERS' ORGANIZATION.

Consul-General Richard Guenther, of Frankfort, reports that the Central Union of the German Consumers' Associations recently held its fifth annual meeting, at which over 600 delegates were present, besides representatives from cooperative associations of England, Holland, Austria, Finland, and Switzerland. The consul-general summarizes the association's operations:

The consumers' associations in Germany are 2,150 in number, having more than 1,250,000 members, and dispose annually of about 330,000,000 marks (\$78,540,000) worth of goods. The Central Union comprises 985 of the 2,150 associations, and in 1907 had a membership of 885,074 persons. It employed 12,783 people in its 2,562 stores or selling agencies. The value of goods sold by the Central Union last year figured up 303,750,000 marks (\$72,292,500), including 32,750,000 marks (\$7,794,500) of goods directly produced by the concern.

The net profits for the year bordered closely on 21,000,000 marks (\$4,998,000). The Central Union now has a working capital of 28,333,000 marks (\$6,743,254) and owns real estate valued at 42,000,000 marks (\$9,996,000). Stock on hand at the close of the year aggregated 32,208,000 marks (\$7,665,504).

SOUTH AMERICAN LIVE STOCK.

LESS PROMISING RECORD FOR THIS SEASON THAN LAST YEAR.

Consul-General George E. Anderson writes from Rio de Janeiro that live-stock returns for the east coast of South America generally do not promise as good a record this year as in 1907, his trade review following:

According to figures published in Brazil, Argentina, and Uruguay the killings in the three countries up to the first week in April are fully 10 per cent less than in the corresponding period of 1907. The figures reported for Argentina, Uruguay, and the Rio Grande do Sul up to April 5, 1908, for all killings are as follows:

	1908.	1907.
Uruguay	448,900	478,800
Argentina	107,800	182,400
Rio Grande do Sul	280,000	268,000
Killed for extract purposes	831,200	924,000
.....	149,200	152,200
Total killed for meat	682,000	771,800

The returns for Rio Grande do Sul are said to be somewhat incomplete, but the record for the same period of last year was faulty to probably the same degree.

Exports of hides from Rio Grande do Sul for the first four months of the year show even a greater falling off. The record from January 1 to April 30 for several years is as follows (no salted hides being recorded for the United States):

Year.	Salted hides.	Dry hides.		Total.
	Europe.	Europe.	United States.	
1908.....	197,082	70,510	.....	267,542
1907.....	224,362	109,480	5,000	338,792
1906.....	167,477	114,808	5,000	287,285
1905.....	147,004	153,324	8,571	308,899
1904.....	285,435	93,525	11,015	389,975

Recent statistics give the number of cattle grazing in the State of Rio Grande do Sul at 5,706,344 and of horses at 1,036,894. The number of sheep is placed at 2,185,306.

BRITAIN'S MEAT SHORTAGE.

REDUCED SUPPLIES FROM VARIOUS COUNTRIES.

Covering the meat imports into the United Kingdom for the first six months of 1908, a British trade journal, commenting on the official figures, says:

The deficiency in cattle is 21½ per cent, compared with the first six months of last year, and 33½ per cent compared with 1906. In sheep we have received 37 per cent less than in 1907 and 40 per cent less than in 1906. Taking the imports of fresh beef, the net shortage on the six months is only .60 per cent, but this has resulted from the fact that the imports of frozen and chilled beef from Argentina have been heavy enough to balance the deficiency in the shipments from United States, New Zealand, and "other countries." The decrease in the case of the former country is quite 42 per cent when contrasted with

the first six months of 1907, and almost 39 per cent below the weight of fresh beef sent us in first six months of 1906.

Live-stock and fresh-meat imports during first six months:

	Quantities.		Values.	
	1906.	1907.	1906.	1907.
Cattle.....number..	183,564	234,082	\$15,247,625	\$19,813,741
Sheep.....do....	37,566	60,424	285,576	441,717
Beef.....hundredweight..	2,826,552	2,843,481	24,420,199	25,457,007
Mutton.....do....	2,184,074	2,456,269	19,728,675	22,097,745
Pork.....do....	276,047	295,235	3,084,801	3,338,468
Bacon.....do....	3,080,111	2,732,647	35,631,360	36,519,004
Total.....			98,398,236	107,667,682

OIL OF PETITGRAIN.

PARAGUAY'S SOLE EXPORT TO THE UNITED STATES.

Writing from Asuncion, Consul Edward J. Norton says that while some Paraguayan quebracho bark or extract of quebracho may be shipped to the United States through Buenos Aires, the sole declared export from Paraguay to the United States consists of the distilled essence of orange leaves, called "oil of petitgrain," the industry being thus described:

The production of this essence is slowly increasing, although the industry is still carried on in a primitive fashion. The principal distilleries are located about 50 miles from Asuncion, among the orange groves of Yaguaron, and the apparatus, usually homemade, is as simple and inexpensive as the palm-roofed hut which shelters it. The stills, however crude they may appear, are as well adapted to their purpose as more costly apparatus, and produce an excellent quality of the essence.

It is estimated that from 300 to 350 pounds of the leaves of the bitter orange 1 pound of the essence may be extracted. The oil of petitgrain is used by perfumers as a base for many of their preparations—to a certain extent in the scenting of toilet soaps—and is employed, I believe, in the manufacture of some flavoring extracts.

Official figures show that the total value of the oil exported during the year 1905 was \$10,617 American gold. This figure is probably below the actual value of the exports.

The shipments of petitgrain from Paraguay to the United States have increased notably, the amount in 1905 being \$2,417; in 1906, \$2,012; in 1907, \$10,002, and in 1908, up to June, \$10,371.

A British trade circular recently received here gives the following wholesale selling prices per kilo of 2.2 pounds of oil of petitgrain in Manchester: French, best, \$18.81; Paraguayan, \$13.71; Portuguese, \$10.18. Quotations from the United States are much lower all around, and show less difference between the prices of the French and Paraguayan essences.

Wholesale druggists or manufacturers of the United States who wish to make direct importations of petitgrain would do well to write the principal exporting firms here who buy the product direct from the distilleries. The stills are so scattered and the output of each so limited that it is impossible to deal directly with them, and the entire product is practically handled by the firms whose names are forwarded [and filed for reference at the Bureau of Manufactures].

JUTE-STRIPPING IMPROVEMENT.

NEW MACHINE PATENTED IN INDIA FOR DECORTICATING THE FIBER.

Consul-General William H. Michael, writing from Calcutta, says that a young engineer of Dalsing Serai, India, has invented a machine which disposes of the wood in the stems of jute at the rate of 60,000 stems per day. A description of the mechanism follows:

The reported experiments show the stems thus treated are well cleaned and without loss of or injury to the fiber. The machine is worked by a 2-horsepower engine, and is light enough to be carried onto the jute field where most convenient to be used. The machine does away with the necessity of carrying the stems off the field, leaving only the ribbons to be removed. The stems can be used for engine fuel if desired. It is claimed that the ribbons will require much less water, much less time for retting (requiring but seven days), and the bark goes off without beating.

The inventor claims from actual tests that in treating jute his machine will diminish labor 70 per cent, that 75 per cent less water will be required, and that about half the time will be required for retting as by the present process. One planter has placed an order for fifteen of the machines to be delivered in July next. The machine will doubtless increase the production of jute in India.

Samples of the jute ribbon as it comes from the machine and of the finished product, also a copy of the specifications covering the claims of the inventor upon which his patent was granted are forwarded [and are filed for public inspection at the Bureau of Manufactures].

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FARM IMPLEMENTS.

GERMANY.

AMERICAN MACHINES IMITATED—EXTENSION OF DOMESTIC CONSTRUCTION.

In the following report from Dresden, July 6, Special Agent Roland R. Dennis explains that American machines are being imitated in Germany and that considerable progress is being made in this particular industry. He writes:

Germany is the one country in Europe where the manufacturer of and the dealer in agricultural implements are going hand in hand to overcome the immense trade that has been developed throughout the country in American-made implements since the Franco-German war. The German is without doubt a good copyist, as is well shown by the way he has "annexed" American patterns of mowers, reapers, binders, tedders, hay rakes, etc., in their entirety, and in taking other American implements and making slight changes in forms to fit them to the requirements of his home trade.

In Strassburg I called on the Landesverband der Landwirtschaftlichen Kreis-Vereine (The United Alsatian Grangers' Association), my purpose being to obtain an explanation for the association selling American implements. A representative of the manager said to me: "It is quite unnecessary for the Germans now to go to the United States for implements to work the soil, as German methods and tools for such purposes are far in advance of anything you have in the United States." When I suggested that there were still a few mowers, reapers, binders, etc., of American make being sold in the country the representative reluctantly admitted the fact, but insisted that Germany would soon be in a position to also stop the importation of implements to harvest the crops. The gentleman was also very particular to impress upon me that it was to be a case of the Germans making at home everything the farmer needed in the way of tools or implements of any kind. The German makers have already secured pretty well all the trade there is in hay rakes and tedders in the country and, as before reported, are becoming strong competitors of the United States in other European countries.

PLOWS AND HARROWS.

Practically the entire plow trade of Germany and a very large percentage of that of Russia is already in their hands, and they are introducing tactics which are producing good results in most of the

other countries on the Continent. The American spring-tooth harrow trade, which at one time assumed considerable proportions, has also been taken from us. The road commissioners in some of the provinces prohibited the drawing of the harrows over the highways on their shoes, so the Germans immediately mounted the harrow on three or four wheels, adjustable by a hand lever at the rear, applied the American word "cultivator" to the tool, and these are now built by several different makers. The retail prices of these tools vary from \$16.90 to \$29.27, as they are mounted on three or four wheels, and have 7, 9, or 11 teeth.

MOWERS AND REAPERS OF GERMAN MAKE.

For many years the Germans have been attempting to build mowers and reapers, but it is only until within the last four or five seasons that the number and quality of this line of machines produced here has at all interfered with the trade of the German branches of American works. I have it on good authority there are now no less than 19 different factories building mowers, and two or three are attempting binders. The general manager of one of the factories engaged in the business informed me: "Ten of these factories are organizations and are well supplied with tools and capital to make a success of such work. The other nine are people in a small way who will probably not continue at it for a long time. We had no desire to go into this line of thing, but we were forced into it. For many years we have had the exclusive agency for an American make of mowers and reapers in Germany, which we could not get again, and as we must have the line to supply to our agents, of whom we have a great many, we were obliged to go into building the machines ourselves."

It would seem as if some of the American firms in carrying out their policy of "loading up," as it is known in the trade, had rather overdone the matter, and in that way, quite unintentionally, had helped the German makers to secure a number of good dealers who would under more liberal treatment not have deserted the American lines.

In northern and northwestern Germany some of the Swedish implement makers are getting a foothold. This movement is helped along very materially by the great trade in Swedish milk separators that has grown up here in the last few years. The custom-house returns show that 20,528 separators were imported in 1907.

GROWTH OF GERMAN FACTORIES.

A certain section of the agricultural press is very severe in criticism of the lack of patriotism on the part of the German farmers in buying American-manufactured implements. The importation of over \$7,000,000 worth of agricultural machinery into Germany in 1907 has attracted much attention and comment. The following article is from the *Landwirtschaftliche Maschinen und Geräte*:

German machine manufacturing has grown greatly in all its branches during the last decade. There is also a great increase in the export of these machines. The imports are, however, not small, having reached in the first nine months of 1907 a valuation of 75,000,000 marks to 80,000,000 marks (say, \$17,850,000 to \$19,040,000). Three principal lines assume large figures, i. e., textile machinery, spinning machines, looms, etc., sewing machines, and particularly agricultural machinery. The imports of all classes of agricultural machines into

Germany for the first nine months of 1907 amounted to 23,000,000 marks (say, \$5,520,000), and these figures will be greatly increased before the end of the year. The exports of the same classes were only about 10,500,000 marks (say, \$2,500,000). These figures force us to ask if the German factories are really not capable of supplying our farmers' wants in mowers, reapers, etc., or if the foreign manufacturers are not given the preference through mistaken ideas.

Four-fifths of the imports are harvesting machinery. In these the imports are nearly five times as great as the exports. Altogether 52,021 machines were imported. Of these the United States furnished 43,300, Canada 6,358, and England 2,363. Is it not possible for the German manufacturers to stop this American and Canadian competition in the home market?

The immense imports of milk separators is partly accounted for by the reciprocity treaty with Sweden, through which the duty on separators was greatly reduced. Altogether 20,528 separators were imported, nearly all from Sweden, a few from Denmark, and a very small number from Canada. Forty-one steam plows all came from England. Lawn mowers and other small machines to the number of 9,853 were imported, over one-half of them coming from the United States.

PREPONDERANCE OF AMERICAN HARVESTERS.

An agricultural technical paper accounts for the immense preponderance of America, particularly in harvesting machinery, by the fact that America manufactures only specialties. An American factory, for instance, turns out only a certain model of a harvesting machine, while in Germany most of the factories build all kinds of such machines. When the same paper recommends the German manufacturer to also go in for specialties it is quite right, and the newer establishments are being arranged to that end while, in single instances, the older factories are changing. Nevertheless, it is a mistake to think that this advice is easy to follow. One must not forget that the American industry, to a certain extent, is the result of speculative capital. According to the demand a special factory, as large as you like, is built with an equally large working capital. It is different in Germany, most of whose large works have grown, slowly or rapidly as their business demanded, from small hand works. Partly from lack of capital and partly owing to slow development their sales were confined to a limited territory, and therefore they thought it reasonable that they should endeavor to supply all the machinery wanted in that territory. It is difficult, if not impossible, for the present generation to accept such a fundamental change, for it would in many cases create havoc with invested funds. While convinced that German manufacturers, and particularly those in agricultural machinery, are in a position, under favorable conditions, to enter into competition with the foreigners, resort to any but straight mercantile efforts to influence the expansion of American industries would be unfortunate.

Mechanisms for Canadian Public Improvements.

The numerous municipalities now being formed throughout the Canadian provinces of Manitoba, Saskatchewan, and Alberta is another big development to which timely attention is drawn by the London Commercial Intelligence. These new centers of population must add largely during the next five years to the present demand of these parts for steam road rollers, scrapers, fire appliances, lighting installations, and other items of the usual municipal equipment; and there are also large contracts definitely in prospect for well boring, grading of highways, drainage, and other public works.

PARCELS POST.

CHILE.

STORAGE FEES TO BE CHARGED ON UNCLAIMED FOREIGN PACKAGES.

Consul Alfred A. Winslow, of Valparaiso, forwards a translation of an order issued by the director-general of posts of Chile, which affects to a certain extent the usefulness of the foreign parcels-post service. Concerning it the consul writes:

The new charges went into effect on May 15 and are based upon the Chilean paper dollar, the value of which is fluctuating. At the time of writing, June 16, it was worth about 18½ cents United States currency, while not long since it was worth 20 cents, and may soon again rise in value. The order is as follows:

Foreign postal packets must be withdrawn from the post-office within seven days after notice of arrival, which will be published in the newspapers or sent by the postal authorities to the interested party. Those not retired in the time mentioned will be charged 20 centavos (100 centavos=\$1 Chilean) for the first four days after the period mentioned and 20 centavos for each succeeding day. This fee must be paid in postage stamps in accordance with the directions of the director-general.

It is desired to apply this fee at present only to the packages entered at Valparaiso, Santiago, Concepcion, and Iquique, and, it will be perceived, after seven days have passed from the date of the act of valuation. The amount of storage charges due will be collected in stamps, which will be placed on the original act of valuation and canceled.

This fee will apply until twenty days have passed, counting from the eighth day following the valuation, as will be seen from the following table:

Day after notice.	Fee.	Day after notice.	Fee.
Eighth	\$0.20	Fifteenth	\$1.00
Ninth	.20	Sixteenth	1.20
Tenth	.20	Seventeenth	1.40
Eleventh	.20	Eighteenth	1.60
Twelfth	.40	Nineteenth	1.80
Thirteenth	.60	Twentieth	2.00
Fourteenth	.80		

After twenty days the packet will be considered as unclaimed and this office will be notified, in order that the sender of the packet may be informed.

NATAL.

INAUGURATION OF A SERVICE FOR TRANSMISSION OF FARM PRODUCE.

Consul Edwin S. Cunningham, of Durban, reports that a rather useful innovation has been authorized by the Natal postal authorities which should be of considerable use to the agricultural community of the colony, concerning which he writes:

It is the Natal produce parcels post, under which parcels not weighing over 11 pounds, containing articles produced, or if manufactured, produced and manufactured, wholly within the colony, are now accepted at all post-offices in Natal for conveyance by post to any place within the colony at the following rates: Up to 1½ pounds, 6 cents; over 1½ pounds and not more than 3 pounds, 12 cents; over 3 pounds and not over 6 pounds, 16 cents; over 6 pounds and not over 9 pounds, 20 cents; over 9 pounds and not over 11 pounds, 24 cents. Parcels may be registered on the payment of an additional fee of

8 cents. The maximum dimensions are the same as for inland parcels post.

This is intended only for the convenience of transmission between points in Natal. All parcels for destinations outside the colony must be prepaid at the ordinary inland parcels post rates. The articles which may be sent include everything produced on the farm, such as butter, eggs, poultry, bread, fruit, dried meats, jam, honey, tobacco, plants, and vegetables. The object of the Natal produce parcels post is to afford the producer a cheap and easy means of directly supplying the consumer.

ITALY.

CONVENTION PROVIDES FOR SERVICE WITH THE UNITED STATES.

Announcement is made of the conclusion of a parcels-post convention between the United States and Italy, which will go into effect August 1.

Thereby parcels of merchandise, prepared in accordance with parcels post regulations, not exceeding 11 pounds in weight nor measuring more than 3 feet 6 inches in length, and 6 feet in both length and girth combined, may be sent in the mails to any post-office in Italy at a postage rate of 12 cents for each pound or fraction of a pound. It is stated that a delivery charge, not exceeding 5 cents, in the United States on parcels from Italy and 25 centesimi (about 5 cents) in Italy on parcels from the United States may be collected from the addressee.

MAKING OF DOLLS.

MATERIAL USED AND HOW THE PARTS ARE ASSEMBLED.

Consul Will L. Lowrie, of Weimar, furnishes the following information concerning the different stages by which dolls are manufactured in that important German city. He says:

Only the assembling of the various parts of the dolls, painting the bodies, arms, and legs, and sticking on the wigs is done at the factory. Each figure passes through about twenty hands before it reaches completion, the raw material being taken to the homes of the work people and then returned to the factory. The work is all specialized, and each time a new process takes place in the evolution of a doll it is done by certain employees who are more or less expert. Bodies are made mostly of paper, although kid is also used extensively. They are molded at the homes or stamped out in heavy iron molds at factories devoted entirely to this feature. All sizes of dolls are made, from a few inches in length to more than 3 feet. The hair is Angora wool from England, which also supplies the rubber (elastics), stretched to keep the arms and legs in place. Styles change each year, and the manufacturers must keep in touch with the modes.

CONSUL CLARENCE RICE SLOCUM, of Zittau, reports that while there are no very evident signs of overproduction, the iron foundries in that part of Saxony are working on reduced time as a prudential measure.

COFFEE VALORIZATION IN BRAZIL.

STATEMENT OF THE OUTGOING PRESIDENT OF SÃO PAULO.

The following information concerning the official résumé of the financial situation of the coffee valorization project is furnished by Consul-General George E. Anderson, of Rio de Janeiro:

The parting message of the outgoing President of the State of São Paulo contained an official résumé of the financial situation of the coffee valorization project at the end of the first year of its operation. He said:

The Government has met the expenses incurred in the defense of the coffee industry from the following sources:

	Rs.
Treasury bills	16, 060, 422\$890
Loan of £1,000,000, Brasilianische Bank Fur D.....	15, 483, 000\$000
Loan of £3,000,000, Henry Schroeder & Co., of London, and National City Bank of New York.....	46, 449, 000\$000
Bill for loan of £3,000,000 contracted with Federal Government..	48, 000, 000\$000
Total	125, 992, 422\$890
Bills on agents abroad for coffee consignments.....	184, 045, 271\$206
Total loans made.....	310, 037, 694\$096
From the loans deduct:	
Redemption on loan of £1,000,000, Brisilan Bank.....	15, 483, 000\$000
Value of coffee purchased, according to accounts.....	270, 578, 554\$948
Net total	286, 061, 554\$948

The balance is in the hands of agents abroad for the service of loans, revision of contracts, etc., to be classified definitely when all accounts are to hand.

This statement means, in American money at present exchange, that the Government up to the time covered by it had borrowed for the valorization project Rs. 125,992,422\$890, or \$37,797,726, on special loans for the purpose, and Rs. 184,045,271\$206, or \$55,213,571, as loans based upon the coffee bought with the first sum as collateral. The total sum borrowed, therefore, was at that time \$93,011,292, according to this statement. The amount expended included Rs. 13,483,000\$000, or \$4,644,900, for loan repaid, and Rs. 270,578,554\$948, or \$71,173,566, for the purchase of coffee. This leaves a balance of \$17,192,826 for premium on loans, the payment of interest, and other expenses of the enterprise.

This statement is not complete, however, for it takes no notice of the 3-franc surtax on exports of coffee on which the entire enterprise is based. The paragraph relating to this is as follows:

In addition to the revenue proper the treasury collected from the 1st of December, 1906, to the 31st of December, 1907, a tax of 3 francs on each bag of coffee exported, amounting altogether to francs 36,852,203.61, or Rs. 23,247,039\$979 (\$7,112,475), specially marked for the defense of the coffee industry. All the expenses incurred in defense of coffee, such as interest, commissions, difference between the par value and rate sold of the external loans, publications, traveling expenses, etc., come from this tax and amount to Rs. 21,127,720\$ (\$6,388,318).

The actual income for the valorization enterprise, therefore, amounted to that time to a trifle over \$100,100,000 American gold, and the balance, on the face of the account, amounts to over

\$18,000,000. Current accounts and charges would, of course, reduce this balance greatly.

According to the figures given the present charge for interest on the loans made, including renewal commissions only, amounts substantially to the income from the 3-franc surtax during the year of the great crop.

The President's statement gives the amount of coffee held by the State Government as follows:

The State is owner of 7,700,000 bags of coffee stored in Europe and North America and 657,500 bags stored in Santos. The coffee abroad is stored in Havre, Hamburg, Bremen, Antwerp, London, Trieste, Marseille, New York, and New Orleans. The inspector for the Government has reported that the coffee stored in Europe is in excellent condition, and has forwarded photographs to the Government in proof of his statement.

THE WORLD'S COFFEE.

VISIBLE SUPPLY AND THE COUNTRIES OF PRODUCTION.

Minister Irving B. Dudley, of Petropolis, transmits a copy of a report on the past, present, and future of coffee, which appeared in a Rio de Janeiro publication, from which the following statistics are taken:

Let us see what the elements are that will go to form crops during the next quadrennium, 1909-1912, and the average annual crop that may be looked for.

Since 1902 no more coffee trees have been planted in São Paulo, and as it takes four to six years for coffee to bear, the only possible element of production are the trees already in existence, all or almost all of which are in bearing at present. The last trees planted will be at their best and in full bearing in the course of the current quadrennium, whilst the influence of replanting exhausted areas, as well as of the intensive cultivation lately followed, will also reach its climax during this period. Under such circumstances it seems reasonable to suppose that the annual average production during the next four years, 1909-1912, will be the same as for the previous quadrennium, plus 5 per cent increase from freshly-bearing trees, or, in all, about 10,000,000 bags per annum.

Twenty years ago consumption was between 9,000,000 and 10,000,000 bags; ten years later it had risen to 13,000,000, and this year is generally estimated at 17,250,000 bags.

At this rate, at the close of the current quadrennium in 1912, consumption should reach 19,000,000 bags, especially if the official propaganda should be as effective as is expected.

The visible supply of the world on June 30, 1908, will be about 14,000,000 bags. Next year's production is estimated by the well-informed Dutch brokers as follows:

Brazil: Santos, 8,250,000; Rio, 2,750,000; Victoria, 300,000; Bahia, 200,000; total, Brazil, 11,500,000. Other countries: Central America, 1,500,000; Colombia and Venezuela, 950,000; Haiti, 350,000; other West Indies, 50,000; East Indies and Java, 697,000; total other countries than Brazil, 3,697,000; grand total, 15,197,000 bags.

Visible supply on June 30, 1908, 14,000,000 bags. Total visible supply on June 30, 1908, and estimated production for the year ended June 30, 1909, 29,197,000 bags, less the consumption for the fiscal year 1909—17,197,000 bags—which leaves the visible supply, at the close of the year 1909, 12,000,000 bags.

By 1915 consumption, at the rate of increase of 400,000 bags per annum, the average of the last twenty years, should reach 20,000,000 bags per annum, whereas production, in the best of hypothesis, will not exceed 17,000,000, and the visible supply will have disappeared entirely.

CONSUL JESSE H. JOHNSON, of Swansea, writes that at the end of May there were in Wales 286 iron furnaces in blast, against 346 at the same time in 1907.

SPORTING GOODS OPENING.

GERMAN CITY OF Breslau MUCH INTERESTED IN ATHLETICS.

Consul Herman L. Spahr finds that Breslau's interest in sports of all kinds grows more lively every year, which leads him to write in regard to the opportunity presented in that second largest city in Prussia for the sale of American athletic supplies:

Horse, bicycle, and boat races are established annual events, balloon ascensions are frequent, and lawn tennis, football, tambourine, and golf have a firm foothold. The young people are very enthusiastic over tennis.

American manufacturers should try for a part of the sporting-goods trade, of which England now has the largest share. The average English or French tennis racket is retailed for 10 to 18 marks (\$2.38 to \$4.28), but cheaper and dearer ones are also to be had. A dozen felt-covered balls sell at 11½ marks (\$2.74), smooth balls at 8 marks (\$1.90), red enameled at 9 marks (\$2.14), the best tournament balls at 13½ marks (\$3.21). Tarred nets are quoted at 6½ marks (\$1.60), or with frame at 9½ marks (\$2.32); racket presses at 2 marks (48 cents), ball nets for 12 balls at 50 pfennigs (12 cents), men's shoes at 7½ marks (\$1.78), women's at 6½ marks (\$1.55). The price of English footballs is 10 to 15 marks (\$2.38 to \$3.57); of German push balls, 8 to 13½ marks (\$1.90 to \$3.21); of tambourines, 2½ to 3 marks (60 to 71 cents); of tambourine balls, 90 pfennigs (21 cents).

A club was recently organized for the furtherance of English and American sports among the students and faculty of the Royal University of Breslau and the English-speaking society people. The use of a part of Scheitniger Park has been granted for golf links. The membership is large and increasing, and players use the links morning and afternoon. Hockey and some forms of baseball will shortly be attempted. Golf sticks are sold here at 5 marks (\$1.19), practice golf balls at 75 pfennigs (18 cents), the regular 2s. ball at 2½ marks (60 cents). A list of Breslau dealers in sporting goods to whom manufacturers may write is forwarded [and may be obtained from the Bureau of Manufactures].

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COTTONSEED PRODUCTS.

NORWAY.

COTTON OIL FOR PACKING SARDINES—MEAL AT STAVANGER AND BERGEN.

Special Agent A. G. Perkins furnishes interesting facts in regard to the use of cottonseed oil by Stavanger packers of sardines, and explains how the sale of meal may be extended in that Norway market. His report, dated Stavanger, July 8, follows:

The use of cottonseed oil by the margarine factories in Stavanger is quite extensive at present, and the churners agree that the consumption of cottonseed oil will continue to increase so long as the quality is kept up to its present high standard. The quality desired for this purpose is choice butter oil, neutral both as to taste and odor. There is some complaint, however, about the condition of the barrels arriving at this port recently. Some have insufficient hoops, and not enough cleats to hold these in place during the long voyage, with the result that there is considerable leakage, especially in hot weather. Exporters should see that their barrels have sufficient hoops (eight if necessary), and that these are securely fastened to prevent slipping.

Among the sardine packers I found only one who is using cottonseed oil at present. This packer stated that he had found cottonseed oil very satisfactory, and would continue to use it; he also stated that he would like to get even a lower grade than the choice butter oil he is now using, and while a lower grade may be suitable, it is perhaps doubtful if the use of inferior oil should be encouraged until it is proven beyond a doubt that it will not injure the trade as a whole. Talking with other packers I learned that several of them had tried cottonseed oil, and not one, even the experts, could tell any difference between the sardines packed in cottonseed oil and those in olive oil, except by chemical analysis. All those who had tried cottonseed oil pronounced it as good as olive oil for that purpose. A very important matter for the crushers to bear in mind is that sardines are often kept for a year in these tins, and they should not sell any oil to these packers which will not keep, for it would ruin their prospects and prob-

ably take them twenty-five years to overcome the prejudice. This is what happened to the cooking-oil trade several years ago in America.

COTTON OIL AND SARDINES.

While in Christiania I was informed that the Association of Sardine Packers at Stavanger had bound themselves under some kind of penalty not to use cottonseed oil, so immediately on arrival in Stavanger I called on different members of this association, including the president and vice-president, and learned that, while such a resolution had been offered and was then under consideration, it had not yet been adopted. Asked if cottonseed oil was inferior to olive or any other oil for this purpose they all said, "only in name," and "especially in the United States, where nearly half of our sardines go." It is claimed that the resolution was intended more to protect the good name of Norwegian sardines in foreign markets, especially the United States, than to prevent the use of cottonseed oil. The main cause of the resolution being offered is said to be that dealers in the United States will not buy sardines marked "packed in cottonseed oil," except at a difference of 3 shillings (73 cents) per case, as compared with sardines marked "packed in olive oil," whereas the difference in the cost of the oils is about 1 shilling (24 cents) per case. Also that the American authorities will not admit goods marked "packed in oil," requiring the name of the oil used on every tin. It was suggested to these gentlemen that such a resolution, if adopted, would be more a slur on American cottonseed oil than praise for their sardines, and in view of the United States admitting their Brisling under the name of "Norwegian sardines," it would appear like returning evil for good to condemn such a wholesome American product, which they all admit is equally as good as any other oil for this purpose. Before leaving Stavanger I felt reasonably assured that the resolution would not be adopted, and Consul Rasmussen, who was present at most of the interviews and participated in the arguments, is of the same opinion.

COTTONSEED MEAL AT STAVANGER.

While Stavanger is in one of the best agricultural districts of Norway, and is a growing market for feeding stuffs, the total imports of cottonseed meal at that port do not exceed 2,000 tons annually. One of the reasons for this condition is that the Norwegian farmers as a rule are not a wealthy class, and admittedly not as far advanced in the science of cattle raising and dairying as they will be in a few years. Another and perhaps more important reason is that American exporters of cottonseed products seem to be working this trade through subagents, with their general agencies in other countries, which is very distasteful to Norwegian merchants. A large majority of the Norwegian merchants prefer to buy articles direct from other countries than to patronize subagents. The volume of business may seem too small for direct purchases, but I believe this is one of the reasons for the small business done, and that good results will come from a direct agency, especially since a direct line of steamers has been established between the Gulf ports and Norway. Another means of stimulating the use of cottonseed meal among the farmers is judicious advertising. This is a small country, yet the means of communication are by no means equal to those of other European coun-

tries, and the American manufacturer and exporter would do well to spend a little money in telling of the merits and uses of cottonseed products.

BERGEN A GOOD MARKET.

COTTON OIL PREFERRED FOR MARGARINE AND SARDINES—USE OF MEAL.

Writing from Bergen, July 11, Special Agent Perkins describes market conditions at that point in the following report:

Bergen is another promising market for cottonseed oil, both with the margarin churners and the sardine packers, the latter, however, depending on the American manufacturers educating the people up to buying sardines packed in cottonseed oil. The writer secured two small tins of sardines, one packed in cottonseed oil and the other in olive oil, and opened them in the presence of three gentlemen, one being an expert sardine buyer for an American house. After sampling the two boxes, much to my delight they all pronounced the flavor of the sardines packed in cottonseed oil superior to those packed in olive oil. I understand that an American company has ordered several hundred cases of these sardines to be packed in cottonseed oil, and so marked, for shipment to the United States, which is certainly commendable, and if a demand can be created for these sardines the increased consumption of American cottonseed oil will naturally follow. Accurate statistics of the total exports of Norwegian sardines are not obtainable at this writing, but estimating the exports to the United States (of which I have exact figures) as half the total (the packers say "nearly half goes to America") this would make the total export approximately 400,000 cases, and as each case contains an average of $3\frac{1}{2}$ kilos of oil (a little more than 1 gallon) the total consumption of oil for the export trade alone exceeds 400,000 gallons annually. This trade is worth trying for.

COTTONSEED MEAL—BAD PACKING.

Being in a mountainous district, with comparatively little agriculture, Bergen does not seem to offer much as a market for cottonseed meal, being outclassed by Stavanger and Trondhjem on the west coast, and Christiania in the eastern part of the country. The total imports of cottonseed meal through Bergen last year are estimated between 3,000 and 4,000 bags, a large part from Germany. The railroad to connect Bergen and Christiania has not yet been completed, but in the opinion of the feed dealers here it is doubtful if the trade through Bergen in feeding stuffs will be materially benefited by this road. Whale meal, made from grinding the dried whale flesh, and containing 85 to 88 per cent of protein and fat, is fed, but on account of the disagreeable odor it is not relished very much by the cattle, yet it is relatively cheap, considering its high protein and fat contents. Corn and bran from local mills also compete with cottonseed meal.

Nearly all of the feeding stuff shipped from Bergen goes by small coast steamers, and the freight charged is the same for a bag weighing 100 kilos (220 pounds) as for one weighing 100 pounds. For this reason the dealers here prefer to buy such products in 100-kilo bags, which up to now have only been obtainable in Hamburg. One of the merchants here says that out of a purchase of 1,000 bags from America, shipped to Stavanger, 800 of the bags were so badly torn

and damaged that he had to supply new ones at a considerable expense to himself.

Grain, flour, and cereals are imported in large quantities by Norway, and Bergen seems to be the principal market for them, as nearly half of the imports are credited to this city. The following table shows the total imports in 1906 of grain, flour, and cereals, in metric tons (2,204 pounds), and the quantities thereof received at Bergen, these being the latest statistics available:

	Total imports.	Received at Bergen.		Total imports.	Received at Bergen.
Barley	107,392	62,942	Rye flour	20,479	2,008
Wheat	20,844	11,451	Wheat flour	42,051	8,124
Corn	18,121	2,424	Rolled or cracked oats ..	5,444	1,484
Rye	232,648	104,786	Barley	2,311	256

A great deal of the grain comes from the Black Sea and Argentina, but dealers here would like to get American products, and it would be well for American exporters to correspond with the firms mentioned in list attached.

SIRUP IN DEMAND.

There is a large demand also in Bergen for sirup, which is used by the fishermen and poorer classes on their bread in lieu of butter. The total imports of sirup in 1906 were 13,637,390 kilos (30,064,990 pounds), at prices ranging between 4½s. to 9s. (\$1.09 to \$2.19) per 112 pounds.

The duty on sirup is as follows:

(a) Ordinary sugar and molasses: Minimum, free; maximum, 5 øre (about 1½ cents) per kilogram. In case ordinary sugar is added with glucose in larger quantities than 25 per cent it is dutiable as glucose. The quantity of the added glucose is decided in such manner as is stipulated by the financial and customs department.

(b) Capillary, mulberry, sirup of roses and violets, and other similar sirups and sugar colors to brandy and other drinkables: Minimum, 55 øre (about 14½ cents) per kilogram; maximum, 65 øre (about 17½ cents) per kilogram.

I submit also the names of dealers and agents desiring American connections for these goods.

DIRECT AGENCIES.

One can not remain long in Bergen without being impressed with the strong determination on the part of the Bergen merchants to patronize local agents who have direct connections with foreign houses. This feeling is more pronounced in Bergen than any other Norwegian town, and whether reasonable or not it is a condition which it will be well for American exporters to consider. It no doubt has a good deal to do with the small American exports to Bergen, and the sooner American exporters realize this the better.

Below are additional names of agents and dealers in Bergen (see Daily Consular and Trade Reports for July 27):

I. E. Mowinkel, agent and dealer, cottonseed meal, grain and feed stuffs, flour, and sirup.

Haakon Lægland, agent, cottonseed meal, grain, and feed stuff.

Nicolay Holtermann, jr., agent, cottonseed meal, oil, grain, flour, and sirup.

F. C. Schoenberg, agent, cottonseed oil and meal.

Behrens & Kahrs, importers and dealers cottonseed meal and grain.

* Einar Blauw, importers and dealers cottonseed meal and feed stuffs.

* Aug. C. Mohr & Son, importers and dealers cottonseed meal, grain, flour.

Those marked with an asterisk (*) usually prefer to do the business on a cash basis.

FISHING INDUSTRY.

SCOTLAND.

A RECORD YEAR IN BOTH THE CATCH AND IN ITS VALUE.

Consul Rufus Fleming, of Edinburgh, submits the following report on last year's catch, and the men and fleet employed in the Scottish fisheries:

The total quantity of fish taken by the Scotch in 1907 (exclusive of shellfish), according to an official report, was 9,078,059 hundredweight, of the gross value of \$15,425,525. These figures exceed the preceding year's totals by 20 per cent and 6 per cent, respectively, and are in each case the highest ever recorded in the history of Scottish fisheries. Toward the gross catch herring and other net-caught fish contributed 70 per cent, trawled fish 23 per cent, and line fish 7 per cent, as compared with 66, 25, and 9 per cent, respectively, in 1906. The average price obtained was \$1.70 per hundredweight, as against \$1.90 in 1906 and \$1.64 in 1905. The value of shellfish caught was \$351,381, a slight decrease as compared with the return for 1906.

The herring catch amounted to 6,313,247 hundredweight, of the value of \$8,838,829, exceeding the year 1904, the previous record for quantity, by 880,753 hundredweight, and 1906, the previous record for value, by \$813,178. The quantity of cured herring exported in 1907 was 1,881,835 barrels, or 339,071 barrels more than in 1906, which had hitherto been the highest record. The greater part of the herring export goes to Germany and Russia. Next in importance to herring is the whitefish, which amounted last year to 2,696,943 hundredweight, of the gross value of \$6,485,790.

The number of persons employed in the fisheries and the various industries subsidiary thereto was 94,773, about 2,500 less than in 1906. Of these, 39,228 manned the fishing fleet, comprising 10,365 vessels of an aggregate tonnage of 144,385 tons, and, with their fishing gear and equipment, of the value of \$23,640,561. Of this fleet 9,262 were sailing vessels and 1,103 steam propelled. There was a decrease of 468 in sailing vessels and an increase of 284 in steam vessels as compared with 1906.

CURED FISH.

Consul Maxwell Blake transmits the following extract from the report of the fishery board for Scotland, giving the value of cured fish and the chief fishing grounds:

The value of the fish (other than herring) cured is estimated at \$3,905,975, an increase of over \$72,998 over the return for 1906. The grand total value of all fish cured reached the record figure of \$17,703,293, or \$484,369 more than the previous record, which was reached in 1906. The districts contributing most largely to the aggregate were: Aberdeen, \$4,864,617; Fraserburg, \$2,412,665; Peterhead, \$2,110,192; Eyemouth, \$860,178, and Wick, \$682,507, on the east coast; and Shetland, \$3,304,549; Orkney, \$400,776; the districts of Stornoway, \$685, 057; Barra, \$403,331, and Greenock, \$213,041, on the west coast.

NORWAY.

FINAL RETURNS SHOW REMARKABLY GOOD SEASON'S CATCH.

Consul-General Henry Bordewich, of Christiania, advises that the Finmarken cod fisheries have now terminated, and as the returns

were unusually good, the total catch has been materially augmented, according to the following figures:

The total of the season's catch for the whole Kingdom has been swelled to 47,900,000 fish; of this some 17,600,000 have been air dried, round, unsalted stockfish, and 27,800,000 split, salted, and dried common codfish.

There has been manufactured 58,700 barrels medicinal cod-liver oil of capacity 26.41705 gallons per barrel, and 25,124 barrels mechanical oil. The ruling prices f. o. b. Bergen, are: Stockfish from \$18.50 to \$22.78 per 100 kilos (220.46 pounds) according to quality; codfish, \$11.25 to \$12.86 per 100 kilos; medicinal cod-liver oil, \$12.86 per tin-lined barrel holding 30 gallons; mechanical oil, \$8.50 per common barrel; salted roes, \$5 to \$10 per barrel.

The result of the spring herring fisheries are 406,500 crans (barrels). Salted herring are in the Trondhjem market quoted at from \$1.88 to \$3.75 per common barrel.

WARSAW COMMERCIAL EXPOSITION.

CLOSER FOREIGN BUSINESS RELATIONS ARE SOUGHT BY RUSSIANS.

Consul Hernando de Soto gives the following account of permanent sample rooms to be opened at Warsaw for the display of foreign and Russian manufactures:

The marked increase of business activity since the beginning of this year, and especially the tendency to establish regular, direct relations with foreign countries, has prompted a number of leading business men to make an effort to establish at Warsaw a permanent exhibition of samples of local and foreign manufacture. The committee of this undertaking has addressed a communication to the consulate, the principal points of which are as follows:

The increased demand for foreign-made goods in Russian Poland has made it imperative to find the best method of importing goods at the lowest possible figure. We have gone over the ground with the greatest care and have ascertained that a large percentage of our tradesmen have, until now, been satisfied to make their purchases through European commission houses instead of communicating direct with the foreign manufacturer. It is evident that this method seriously enhances the cost of purchase. A Polish buyer seldom travels to the principal European manufacturing centers and, therefore, has a very limited knowledge of what the foreign market can produce or offer. He waits until the selling agent of some foreign house comes along and frequently allows himself to be led astray by unscrupulous speculators, who, in order to secure large profits, will sell inferior goods of one country, making him believe that he is buying a well-known make of superior quality from a certain other country.

TO COMMUNICATE MORE DIRECTLY WITH MANUFACTURERS.

In order to offer our tradesmen every facility and opportunity to place their orders direct with the foreign manufacturer, it is proposed to open, in Warsaw, as soon as possible, a permanent exhibition of samples of foreign make. The local manufacturer will be given an equal chance to exhibit his products in competition with foreigners.

In connection with this exposition it is proposed to open a commission agency for negotiating between parties, and an information and inquiry office for supplying both manufacturers and buyers with accurate information as to the standing of both foreign and local firms.

Such an institution, based upon the mutual support of foreign producers and merchants as well as our own, will unquestionably greatly contribute to the increase of our import and export trade.

The control should be in the hands of thoroughly competent men whose honesty and integrity are beyond question. To insure the maintenance and upkeep

of the exposition, as well as of the commission agency and information bureau mentioned, producers and merchants must pay yearly a certain sum for exhibit space, a commission on transactions made, and a stated fee for information supplied. The sum necessary for the Government deposit as security for any transaction made through the institution, amounting to 25,000 rubles (\$12,500), as well as sufficient funds for the initial cost of inauguration and maintenance, will, it is suggested, be secured by forming a company with a capital of at least 50,000 rubles, which could afterwards be turned into a limited liability company in accordance with the increase of its transactions.

The scheme has been submitted, for approval, to the president of the chamber of commerce in Warsaw. We will thank the American consulate if it will acquaint the leading commercial circles in America accordingly and encourage American manufacturers to rent spaces for the display of their products.

AMERICAN OPPORTUNITIES—LONG DELAYS UNDER PRESENT METHODS.

The consuls of the other countries have taken great interest in this undertaking, and I am reliably informed that the Austrian representative, with the support of his Government, has guaranteed a portion of the fund to be raised.

The plan is an excellent one. The numerous reports sent from this office during the past months clearly demonstrate that there is an exceptional demand for American goods in Warsaw. Many obstacles with regard to the importation of American products will be overcome.

One of the most serious drawbacks which have recently been noticed, is the long delay before exact quotations can be obtained from the United States. In spite of the special request, in a former report on trade opportunities, for quotations c. i. f. certain European ports, catalogues without prices have been forwarded, accompanied by a letter saying, "prices and discount sheets on application."

Considering that mail from Warsaw to the United States travels an average of fifteen to seventeen days, it takes five weeks to get a catalogue, usually without prices. The party interested is compelled to write for particulars, thus involving another delay, making about 2½ months before a first order can be given. For example, on April 6, a special report on demand for ice-making machines was forwarded, for which the interested party expected to have a ready sale during this summer. On June 1 a number of catalogues were received at this office, all of which, excepting one, were without prices. It will take fully thirty-five days to obtain quotations, and before goods can be received the summer will be over.

Full particulars in regard to the date of opening of the exposition and price for space will be given as soon as possible.

Chinese Shipping Enterprise.

Vice-Consul-General George E. Chamberlin sends from Singapore the report that Chinese residents at Pacific coast ports are subscribing to a Chinese national steamship company which proposes to enter into the Transpacific carrying trade with a line to San Francisco or Seattle. The Two Kwangs Chinese Steamship Company has been formed as a patriotic concern; first to place a line of coasting steamers in service, then a Transpacific line, similar to the service of the large Japanese steamship companies. The Chinese guilds of South China are organizing the company, and agents are being appointed wherever Chinese are found in considerable numbers to sell stock for the company.

CANADA'S BACON TRADE.**PROPORTIONATE SUPPLY IN THE MARKETS OF GREAT BRITAIN.**

Consul A. G. Seyfert writes from Owen Sound that a correspondent from London, England, to the Montreal Trade Bulletin uses some interesting facts in his letter on the bacon trade from Canada, upon which the consul comments:

For some years Canada has scientifically advertised all over England this article until people began to ask for it. The correspondent says:

People in Canada who argue about the selling price of hogs and what the packers can afford to pay to the farmers for their hogs have apparently been arguing from false premises. They have assumed that the English market is dependent on Canada for bacon, and that the price of hogs in Canada fixes the price of Canadian bacon in England.

He gives the following figures to show that England never depended on Canada for her supplies of bacon, the first three months of this year and the corresponding period in 1904 being used for comparison: England imported from the United States during January, February, and March, 1904, 1,504,200 hogs; 407,500 from Denmark, and 258,738 from Canada. For the first three months of this year the importation from the United States was 1,728,000; Denmark, 510,600; Canada, 166,560, or nearly 7 per cent of all the bacon imported.

Purchases of Cars by Belgian State Railways.

Consul-General Henry W. Diederich, of Antwerp, quotes the explanation of the Belgian minister of posts, railroads, and telegraphs to the Chamber of Deputies at Brussels as to his purchase of 200 coal cars in Germany in 1907, the reason given being that Belgian firms had not made proper deliveries on their contracts on the order for 2,678 cars to be delivered by September 19 at latest; only 874 cars had been furnished by that date.

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FLOUR MILLING INDUSTRY.

THE UNITED KINGDOM.

FLOUR AND WHEAT IN SCOTLAND—PECULIARITIES AND REQUIREMENTS OF GLASGOW'S TRADE.

Writing from Glasgow, June 30, Special Agent M. H. Davis furnishes a report on the flour trade of Glasgow which American millers will find informative. The report follows:

The city of Glasgow has a population slightly in excess of 1,000,000, including the immediate suburbs. The importing merchants in flour and the local mills supply a population of probably three times that number of people, their territory covering the more densely populated western section of Scotland, including the very extensive coal mining regions. It is believed that no section of the United Kingdom requires more bread per individual than the portion tributary to Glasgow. The statistics seem to bear out an annual consumption of the equal of 7 bushels of wheat per capita, or nearly one-half more than the rate in the United States.

The milling industry of Glasgow consists of 6 large concerns of varying capacity, but sufficient to have produced in 1907 approximately 1,400,000 barrels of flour. They make slightly in excess of one-third the requirement. All are said to be very prosperous. The consumption of wheat by these mills in 1907 was not far from 6,000,000 bushels, this being a full 1,000,000 bushels more than the average for the previous four years, as indicated by the published reports.

IMPORTS FROM AMERICA.

The importation of flour, while showing less in 1907 than in 1906, exceeded somewhat the years 1905 and 1904, but was less by 350,000 sacks or, say, 500,000 barrels, than the average of the six-year period from 1898 to 1904. The amount imported in 1907 was 1,581,894 sacks, 280 pounds each. Of this amount, the United States and Canada supplied 1,126,000 sacks. What portion of this is properly creditable to Canada the available statistics do not show. It is probably several hundred thousand sacks. Much of the Canadian flour comes through New York, Portland, and other American ports, while a great deal of American flour is exported by way of Montreal and St. Johns. Not much Australian flour reaches Glasgow, but considerable quantities of French and Hungarian flour find a market here. For many years Glasgow has been a good outlet for the higher

products of Hungarian mills. At present imports from Hungary are exceedingly light, the price of the highest grades being 10 shillings per sack (\$1.65 per barrel) above American hard winters, and about 7 shillings per sack above the best Liverpool patents, which are said to be taking the place of Hungarians.

FANCY GRADES FROM GERMANY.

Of late German flours of very fancy grade, "short patents" evidently, are coming in considerable quantities, under the stimulation of the rebate system of the German Government. Some samples I have just seen appear to closely match the favorite Hungarians in quality, at 10 or 11 shillings per sack under them in price. The character of these high-class German patents is similar to our best soft winter wheat goods now found on this market, except that they are of a higher grade, clean, bright, and very strong. Without knowing positively, for there is no means of positive information, I would say that the German flours now sampling on this market are 40 per cent patents at 27 shillings 6 pence c. i. f., and 50 per cent clears at about 2 shillings and 6 pence less. They are certainly better in quality by considerable than well known Ohio and Indiana patents and clears that can be bought at 26½ and 24 shillings, respectively. It is not so much the price that is selling these German flours, but the exceptionally low price for the quality and the quick time of delivery. From all I can learn there would be large transactions if trade was active. Some very good orders for this and the Irish markets have recently been placed.

HIGHER AMERICAN QUALITIES NEEDED.

I am positive that the United States has the facilities for making equally good goods and that, with equal quality assured, our soft-winter-wheat mills would have the preference with the trade at the same price. I am more and more impressed with the belief that higher quality would be more sought after in American flours if it were furnished in more abundance. As it now appears the matter of quality varies so in the flours from America that the general conception of our standard of excellence is not high enough to attract. I believe that 1 or 2 shillings more per sack could be obtained by American makers of soft-wheat flours if they would raise the quality of their "patents" and "extra fancies" accordingly, and that then they would do more business with Glasgow buyers than they can hope to do on present standards. The real competition is on quality, and will be sharper as the Liverpool and German mills get more foothold in this and the Irish markets.

GOOD MARKET FOR HARD-WHEAT FLOURS.

While Glasgow is one of the best markets, probably now the best, for soft-wheat flours of American make, it consumes far larger quantities of hard-wheat flours. Fully 75 per cent of all the flour used in and about Glasgow is hard-wheat product. Formerly spring-wheat mills had 90 per cent of the import requirements of this trade. Now hard-winter-wheat flour of the Kansas variety has much more than half of it, with the local mills second, and the spring-wheat mills doing a comparatively small business. The local mills grind mostly hard wheat—largely that of Argentina, with large quantities of

Nos. 2, 3, and 4 Manitoba hard spring. The latter, though somewhat frosted, gives the needed strength. Where the short system of baking is in use these flours are satisfactory at 28 to 30 shillings per sack delivered at present. Where the long or Parisian barm method prevails (and this is most generally in use with bakers) the strong "Minnesotas," so called, are an absolute necessity. But not as much of this quality of flour is now used as would be the case if its strength were greater, even if the price were higher. The bakers can manage to get along by using either hard-winter or local flour with the "Minnesotas," even in the long system of baking, but their yield of bread is less than it would be if more and stronger qualities of hard spring were used.

PREFERENCE OF THE BAKERS.

The short patents produced by Kansas mills seem to be in demand along with the best of the hard springs. The long Kansas patents and the spring patents made with hard-winter mixtures serve the purpose with short-system bakers, but in general do not excite interest because of their irregularity of quality as between mills, and hence even at higher prices the local mills get the preference. With them the baker knows just what he will get and when he will get it. I can see that standards adopted by our mills applying to hard spring and hard winter would encourage much trade and would be welcomed by the importers who now have trouble to maintain themselves with the bakers, because the flour they get from various mills is not uniform. Often it is not regular from the same mill. With few exceptions no one mill in America seems able to supply the trade of any one importer—at least the latter most generally seem to have several American connections. The bakers do not concentrate their trade, and hence there is a constant "shopping around" when buying is active. The importers, or many of them, have of late taken on accounts of the local mills, and some are financially interested in mills here and at other United Kingdom points. They say they have been forced to thus divide their interests. How much of the incentive for so doing comes from necessity is not clear. If American grades were more dependable there would not have arisen the need for division of effort and interest, for the importers are, after all, more closely related to the American mills than they can ever become to the mills here. The latter, once they get to a point where they can supply the bakers in full, will have little use for the importers. By overcoming delays in transit and irregular arrivals, and by fixing standards that will be recognized—and that on the highest practicable basis—the mills of the United States will greatly increase their business here.

COMPETITION OF BRITISH MILLS.

It must be borne in mind that the last few years have worked great changes. New British mills of high efficiency, new sources of wheat supply, a growing sentiment favoring home industry—these all enter into the proposition and must be duly considered by American mills interested in this market. The customs and prejudices of the people have changed with the altered conditions, and our millers must take measures to fortify themselves and their representatives here against the inroads sure to follow such changes. If I speak plainly as to

qualities and methods it is only to admonish our millers to the needs as I see them. The situation here calls for the recommendations made in these reports as to higher qualities of product and their standardization, and then for a thorough, well-directed advertisement to the buyers and their customers regarding what is done in this respect.

GLASGOW FLOUR TRADE NOTES.

Prepayment of freight charges by United States mills is objected to by Glasgow importers.

A "country" mill that recently won three gold medals at a bakers' exhibition advertises the fact in connection with the statement that it has already won 120 gold medals.

The word "Minneapolis" on the sacks of local mills' flour is in use to give standing to the product, though the chief component parts are wheats from the Argentine or from Manitoba.

The British mill that won the 50-guinea silver cup (\$255 value) announces, in a permanent form of advertising, that it has heretofore won 70 gold medals and other valuable evidences of superior quality.

One large British milling concern is advertising widely its offer of over £1,000 (\$5,000) in prizes at the bakers' exhibition, to be given in September. The same concern is offering \$2,000 in prizes at its private "bread competition" on August 13.

There have been considerable arrivals of flour from United States points west of the Mississippi River of late that have averaged less than 30 days in transit from mill. This expedition of business is attracting the attention and interest of importers.

While American flour shipments to Glasgow of 30 and 40 days ago are arriving freely, this is only a recent condition. So much trouble and expense have for the past year and previously been experienced by Glasgow importers that they are unanimous in attributing to delayed and irregular shipments the largest share in the loss in American trade on flour. They claim that shipments of wheat and provisions do not suffer delays in transit.

The methods of advertising employed by British mills are in no wise a reckless use of money. The knowledge that they are winning prizes on quality is continually kept before the buyers for the big bakeries. The prizes in money that the mills offer go to the practical bakers or foremen, and are in turn advertised by the successful bakers as proof of the excellence of their products.

It is noticeable in the Glasgow flour trade that when a few large bakers buy freely nearly all the smaller buyers follow suit. It is not uncommon for six or eight months' stock of flour to be contracted for in this manner, which the importers have to carry until deliveries are called for. Thus there may be long periods when the bakers are out of the market.

Visiting the bakery of the School of Baking Technology of the Glasgow and West of Scotland Technical College, I learned that the best results in bread were obtained by blending three-eighths of high-class soft winter "patent" with five-eighths of the best Minnesota "patent." Approximately the same results in bread are obtained by blending a high-class Kansas "patent" with a soft winter "patent" and a well-known spring wheat "patent," one-third of each.

The Glasgow and West Scotland Technical College had in attendance as high as 7,000 students last winter. Its present term in baking technology, just closing, had enrolled 160 students in the science of baking bread, cake, etc. The course in baking is two years. The equipment is complete and of the very best, with laboratories for testing all ingredients chemically and otherwise. Bread is baked daily, blending machines, mixers, and ovens being part of the equipment. The students do all the work.

Millers should bear in mind that under the amended British "Merchandise Marks Act" the name of the country of origin does not have to be placed on the sack of flour, as formerly. The amendment went into effect in January, 1907. Thus "blind brands" are used on flour that at one time may be of United States origin and at other times be made in Germany, Belgium, or France. The lowest seller gets the orders. The miller gets no credit for his excellence of quality, but may have his flour rejected if slightly below the standard of some foreign flour under the same brand.

VEGETABLE FIBERS.**BRITISH INDIA.****SIDA FOR THE MANUFACTURE OF TEXTILES FINER THAN JUTE.**

The following information concerning the sida fiber of India is furnished by Consul-General William H. Michael, of Calcutta:

A sample of sida fiber is transmitted, which was received from the acting director of commercial intelligence for India, with the following letter:

I furnish herewith some samples of sida fiber, cultivated experimentally by the government of Eastern Bengal and Assam, and inquire if any firms in America are willing to assist in creating a market locally for the fiber. It is believed that the fiber can be used in the manufacture of textiles finer than jute.

In looking up the history and possibilities of the sida fiber it is found that it is not new by any means, and that the statement of the acting director's letter as to its qualities is well supported by scientists who have bestowed their attention on the plant, which is widely distributed throughout India.

Doctor Watt, in his report on the flora of British India, says:

It may safely be said that if chemistry can be trusted to indicate the properties of fiber, sida is unquestionably an infinitely superior fiber to jute. Under hydrolysis (for bleaching and cleaning with an alkali) it loses a very much smaller proportion of its weight; is, therefore, less easily disintegrated by the action of water, and is consequently much more durable. Similarly, it loses less under the acid purification, and by nitration obtains a considerably greater weight, while it possesses a much larger percentage of cellulose. A fiber to recommend, it is surely worthy of the time and expenditure necessary to ascertain whether or not all these advantages are financially counterbalanced by a less acreage yield.

From the fact that the fiber does well in Eastern Bengal and Assam it should do equally well in our Gulf States, and in the Philippine Islands, where the climate is much the same. Wherever flax can be grown sida may be grown also, but a semitropical climate is preferable. Major Hannay, who as far back as 1853 experimented with sida, says:

Seed was sown broadcast on May 16, and the crop cut in September. The stems were covered over by grass rubbish to cause fermentation, which took place in four days, and they were afterwards steeped for twelve days. The fiber was then cleaned by the same method as is pursued with jute.

If samples of sida seed can be obtained they will be forwarded to Washington. [The samples of the fiber transmitted by the consul-general are filed in the Bureau of Manufactures.]

MEXICO.**THE ZAPUPE PLANT, ITS FIBER, AND ITS ADAPTABILITY.**

Vice-Consul Russell A. Millwood, of Tampico, furnishes the following information concerning the zapupe plant and its fiber:

It can not be definitely stated just when zapupe was first known in the States of Tamaulipas and Veracruz, but there is every indication that it is indigenous to this section. It has been used by the Indians, who, in a primitive fashion, adapted it to many useful purposes, such as the manufacture of cordage, rope, fish nets, lariats, and yarns for weaving.

The growing of the plant beyond either a wild or experimental stage to any extent was only begun in 1905, when considerable interest was

taken in the industry, with the result that, to date, over 5,000 acres have been placed under cultivation in this vicinity, and additional large tracts of land are now being cleared, preparatory to further increasing the present acreage.

DESCRIPTION AND CLASSIFICATION.

It is a filamentous plant, producing a fine white fiber, strong, brilliant, soft, and pliable in texture, and although similar to other fiber plants found throughout Mexico, it is said to be far superior in quality and more rapid in growth, yielding a good return in three years, while the others require from five to seven years.

There are seven kinds of zapupe in this district, but only three kinds are cultivated, viz, the estope, or blue; the tantoyuca, or long leaf; and the tepezintla, or short leaf. The tepezintla is the most popular and most productive. Another variety, the Vincent, has been recently propagated and introduced on the Isla de Juana Ramirez and bids fair to become one of the leading producers. It closely resembles the tepezintla, but matures more rapidly and produces a superior grade of fiber.

PLANTING AND CULTIVATION.

A light, sandy, well-drained soil is most suitable, and, after the initial clearing and plowing, no further preparation of the ground is necessary, as the plants are exceptionally hardy and vigorous and require little care when once properly started.

Planting can be done at any time of the year, but it is desirable to complete the operation either before or after the rainy season (April to October), when the weeds and wild grasses are most in evidence and seriously retard the development of the plants.

Few plants possess the strength and tenacity of the zapupe, and when full development is attained it is most formidable, and will not be molested by stock, cattle, or game of any kind, thus rendering fencing, an expensive operation in this country, unnecessary.

Each year, after maturity and during the life of the mother plant, six or seven sprouts or suckers spring from the root, and these can be cut and set out between the rows or removed to the propagating inclosure. Another interesting feature is the sprouting of a long stem, 15 to 20 feet in height, which occurs toward the life end of the plant, and which blooms into a large cluster, yielding from 1,000 to 2,500 complete scions, which drop off, and may also be set in a propagating inclosure.

HARVESTING AND PREPARATION FOR MARKET.

The leaves may be harvested at any time of the year, but are usually cut regularly every three months, care being taken to sever them clean to the stem, as it has been found that irregular cutting is frequently the cause of killing the plant. After gathering, the sharp thorn ends are cut off the leaves, which are placed in bundles of 50 and carried to the cleaning shed where they are made ready for shipment. The cleaning is a simple operation, consisting in running the leaves through a machine shredder, which will handle about 20,000 leaves per hour, with the aid of three men. The fiber is then allowed to thoroughly dry in the sun, after which it is made ready for the market.

The uses to which zapupe may be adapted are almost unlimited. From its fiber is manufactured the finest cordage and rope, which will

neither mold nor kink, and which is unaffected by climatic conditions of any kind.

By machinery each fiber is divided into 100 parts or threads, unfolding all its brilliancy and softness. It has been used to replace silk, but owing to the small amount produced in the past has not been exported for that purpose, the entire output being consumed in Mexico.

Land suitable to the cultivation of zapupe varies in price from \$2 to \$20 gold per acre, and at the present time is being largely dealt in by Americans, who are immigrating into Mexico in numbers.

The cost of clearing the ground preparatory to planting averages from \$5 to \$15 per acre, and the young plants, according to age, vary in price from \$3 to \$10 per hundred.

From 50 to 55 pounds of fiber are produced from each thousand leaves, thus averaging from $2\frac{1}{2}$ to 3 tons of fiber to the acre, valued at \$40 per ton. An annual profit of \$150 per acre can be cleared on zapupe, and a ready market found for its sale, both in Mexico and the United States, where samples have been submitted and pronounced most satisfactory.

No shipments of importance have as yet been made from this district, and the possible production has been variously estimated, but conservative figures place the amount that will be ready for export trade within the next year at 5,000 tons. [Samples of zapupe fiber, and the names and addresses of leading zapupe planters, are on file in the Bureau of Manufactures.]

HORTICULTURE IN INDIA.

INTRODUCTION OF NEW PLANTS, TREES, SEEDS, AND FLOWERS.

Consul-General William H. Michael sends the following information from Calcutta on government aid to horticulture in India:

The annual report of the Royal Botanic Garden shows that a large number of Manicoba rubber plants were introduced into India during the last year from the Royal Botanic Gardens at Kew, England. The plants are of the Manihot species, and are said to yield superior rubber in large quantity.

The government has also introduced into India sugar cane from Barbados, the South Sea palm from Hawaii, and seedless oranges from the United States. Several thousand packets of various kinds of seeds have been received by India from all over the world, and nearly 3,000 packets have been distributed. More than 40,000 plants were distributed and 4,000 were received. The plants and seeds distributed were for the most part of economic value, such as bamboos, fiber plants, and various kinds of trees.

The Douglasdale estate near Naini Tal, India, has been purchased by the government with the object of establishing a testing and propagating station for varieties of fruit, vegetables, and flowers most suitable to the outer slopes of the Kumaon hills.

CONSUL H. ABERT JOHNSON, of Liege, says that the official report shows that the Belgian mint was quite active during 1907, producing silver, nickel, and copper Belgian coins, as well as nickel pieces for Roumania and Colombia. In all 67,000,000 coins were struck off, having a value of \$1,768,000.

MARKET GARDENING IN FRANCE.

INTENSIVE CULTIVATION OF VEGETABLES NEAR PARIS.

The following information concerning French market gardening in the vicinity of Paris is furnished by Vice-Consul-General Dean B. Mason, of that city:

Intensive cultivation of vegetables is carried on to an extent and to a degree of perfection in the immediate vicinity of Paris that has not been attained elsewhere. Not only are vegetables cheaper and better in Paris than in most European cities, but vegetables grown in the immediate vicinity of the city are shipped to London, Germany, Austria, Belgium, and even as far as St. Petersburg.

The English trade is especially important, and large quantities of vegetables sold in London during the winter and early spring are grown under glass in the neighborhood of Paris.

These remarkable results are due to a system of intensive gardening that makes it possible for a family to live comfortably on the produce of from $1\frac{1}{2}$ to 2 acres, by the thrift and skill of the French gardeners.

FRENCH TREATMENT OF THE SOIL.

The French method of treating the soil consists in a continual mixing and compounding of the top soil, the slow and laborious system of trenching employed by English gardeners not being used. With new ground, the French gardener begins by digging out the top soil, which he mixes and remixes with manure, and a thin surface of this soil is laid on the best manure. The heat necessary for the growth of vegetables in winter and early spring is derived from the fermentation of manure. Each gardener maintains a manure pile, which is built up during the summer, the manure being pressed to retard fermentation, which is only partly effected in the pile as the manure becomes dry. The dried manure from the pile is mixed with a smaller quantity of fresh manure when used in the garden. The fresh manure restarts the decomposition of the dried material, which produces a steady warmth whose intensity can be regulated by the quantity and amount of manure used, whereas fresh manure, if used in quantities, would produce an intense heat that would soon give out.

The vegetables raised in the winter and early spring are grown under glass bell jars or glass hinge frames. That the glass is not the whole secret is shown by the amount of lettuce and other greens grown in the early spring between the bell jars. A plentiful supply of water is essential to such a system of cultivation, and the gardens are provided with motors which pump the necessary water so that all parts of the garden can be sprayed by hose connected with underground pipes.

THE PARIS TRUCK-GARDEN ZONE.

Within a radius of six miles of the fortifications of Paris there are 1,200 "jardins maraichères," or truck gardens, under intensive cultivation, having an average area of from $1\frac{1}{2}$ to 2 acres each. By far the greater part of these gardens are located within a mile of the city, and quite a number are within the fortifications. Especially to the southeast are to be seen great numbers of gardens, from which

thousands of dollars' worth of vegetables, particularly early lettuce, are shipped to the markets of London, Paris, and Cologne.

Land is necessarily very dear, and the price of a 2-acre garden, with house, varies between \$10,000 and \$12,000, which rents for from \$400 to \$500 a year. The cost of equipment of such a garden, including petroleum motor necessary for pumping water, glass bells, frames, etc., averages about \$5,000.

The cost of equipment is borne by the gardener, who often borrows the necessary capital. The secretary of the Syndicate of Market Gardeners, a practical gardener of long experience, estimates the average yearly savings of the gardeners, after deducting their living and other expenses and interest on their investment, at about \$500.

Remarkable profits are sometimes realized by early or fancy crops, an acre of land sometimes producing \$6,000 per annum, but such results are exceptional and require considerable skill and increased outlay. The average gardener is satisfied if he can make from \$1,500 to \$1,600 from an acre and a net income of from \$800 to \$1,000. Many of the gardeners own the land they cultivate, and in some instances fortunes have been made by the rapid increase of the value of real estate.

A market garden located within a mile of Paris which was personally examined produced annually some \$3,200 worth of vegetables on an area of about 2 acres. The rent paid for this farm was \$400, and the tenant who worked it could count upon a net annual income of \$800 and the use of a simple but comfortable house.

The heaviest items of expense were the wages of four field hands, the purchase of stable manure, the maintenance of a horse and wagon for hauling produce to market, and the maintenance and repair of sashes and glass bells.

The workmen were boarded and paid something over 50 cents per day, the rate of remuneration varying according to the season. When laborers are not boarded they are paid from \$1 to \$1.20 per day. The cost of manure was between \$600 and \$800 per annum.

The garden showed every evidence of thrift and industry, and when visited in May there was not a square foot of unutilized space, and this was said to be the case during the entire year. In some places three kinds of vegetables had been sown simultaneously, the earliest vegetable being removed before the second was ready for development.

MARKETING THE CROPS.

The Paris gardeners keep their land productive by a quick rotation of crops the entire year, but they make their profits in the winter and spring. In the summer and autumn prices are lowered by the competition of the large truck gardens located on cheaper land, but within easy reach of Paris, and the export trade ceases to be profitable. Certain vegetables bring reasonable profits during the summer—melons, for instance, being even shipped to cities south of Paris. As a rule the gardeners are satisfied if they can make a living in the summer, and they make their profits with the vegetables grown before their natural season.

It is calculated that 100,000,000 heads of lettuce are raised annually in the jardins maraîchères of Paris, the greater part of which

are shipped to London and Cologne during the winter and spring, after being wrapped in paper and crated.

Paris is kept supplied with lettuce and other greens during the entire winter, and although the prices paid are higher than in summer they are still within the reach of people of moderate means. Carrots, radishes, cauliflowers, and melons are cultivated on a large scale, and most other vegetables to a more or less important extent.

The existence of the jardins maraîchères in close proximity to the city is due to the facilities for procuring suitable manure at reasonable prices and to the nearness of a great market. The produce sent to Paris is hauled by wagon to the central market and sold by women, the same wagon bringing back from time to time stable manure from the city.

OUTSIDE COMPETITION.

The rapid development of railway facilities has placed Paris in easy communication with the south of France and Algiers, where vegetables can be grown in the open fields the greater part of the year, and it is a striking proof of the value of the system of cultivation practiced by the Paris gardeners that, in spite of this competition and the dearness of their land, the production of the jardins maraîchères is increasing.

The growth of competition and higher prices for manure, wages, etc., have affected the production of the jardins maraîchères, and certain vegetables can no longer be raised profitably. Only a fancy variety of tomato, for instance, whose cultivation requires special pains and skill, and which finds a very limited market on account of its price, brings a fair remuneration. It is also likely that early asparagus, which has been an important product, will eventually be produced only in the south.

It is not considered probable, however, that outside competition can affect the demand for the early lettuce and greens of the jardins maraîchères; it is inferior in quality and not as fresh, as it requires two days to place southern produce on the Paris markets, while the product of the Paris gardens is gathered in the afternoon and sold the next morning.

Especially the more perishable vegetables, and the finer qualities requiring skill and careful cultivation, are produced to a degree of perfection on the jardins maraîchères and bring such good profits as to assure the future prosperity of the Paris gardeners. The greater part of the products of the gardens are exported, and this export trade is increasing.

INTENSIVE GARDENING POSSIBILITIES IN THE UNITED STATES.

The Syndicate of Market Gardeners, one of whose principal objects is to further the export trade, has even investigated the feasibility of exporting early vegetables to New York, and only the difficulty experienced in obtaining a satisfactory arrangement for the cold storage of its products on the transatlantic liners, and the fact that the growing demand in England offers a sure and profitable market for more vegetables than the growers can supply, has postponed the execution of the project.

According to the census of 1899 the average value per acre of vegetables in the United States was \$42.09, and the average value

per acre in Queens County, now within the limits of New York City, where conditions are in some respects similar to those of Paris, was \$140—the highest average of any county in the United States. As vegetables to the value of \$1,600 and over are grown per acre in the jardins maraîchères of Paris it would appear likely that Americans have something to learn from the French in intensive gardening, and the promising results obtained in England tend to show that it may prove profitable.

A severe winter is not feared by the French gardeners, but they do require sunshine, and in that respect the winter climate of the United States is more favorable than that of Paris. There is no reason why vegetables can not be grown throughout the winter by intensive cultivation in the vicinity of the large American cities by following the French methods. Capital is required for the installation of such gardens as have been described, but a commencement could be made on a very small scale.

[A copy of *Ma Pratique de la Culture Maraîchère*, giving full information as to the treatment of the soil and the method of cultivation of vegetables in the jardins maraîchères of Paris, based upon the experience of a practical and successful gardener, is on file in the Bureau of Manufactures.]

TRADE IN JAPAN.

COMMERCIAL AND INDUSTRIAL EFFORTS FOR ADVANCING THE COUNTRY.

Consul-General Henry B. Miller sends from Yokohama the following Japanese newspaper matter relating to trade and commerce:

The market in Kobe for imported flour continues very unfavorable, the quotation being even below flour produced in Japan. Foreign flour is being sold at about \$1.15 per bag, against about \$1.20 for Japanese.

The value of matting exported from Kobe during May amounted to \$117,700, showing a decrease of \$125,690 on the figures of the previous month and of no less than \$181,500 on the figures of the corresponding month of last year. The price still continues to decline.

The value of fertilizer imported up to June this year amounted to \$6,203,000, showing an increase of \$1,799,500 on the figures for the corresponding period of last year, but the demand has not increased in proportion. In and about Tokyo alone, 300,000 to 400,000 bags or bales are known to remain in the warehouses unsold.

The Sydney correspondent of the British Trade Journal states that it was recently discovered that some of the paper used in the federal printing office was made in Japan. This has caused the Australian federal treasurer to have inserted in all future contracts the name of the country where the supplies have been, or are to be, manufactured, and here it may be mentioned, says the correspondent, that Japanese competition in the paper, printing, and stationery trades is continually becoming more pronounced, the style and production being marvelously good. Thousands of business catalogues are being issued by large retail houses, the cost f. o. b. being so low that the federal duties cease to be prohibitive. According to the correspondent referred to, Japan is likely to enjoy a considerable export trade in paper supplies of almost every description.

In the eleven years since the promulgation of the shipbuilding encouragement law in March, 1896, to June, 1908, 88 steamers, with an aggregate tonnage of over 200,900, were built in Japan, receiving bounties in accordance with the same law. Eleven steamers with an aggregate tonnage of about 8,200 are being built with the bounties under the shipbuilding encouragement law.

The Japanese cotton spinners' association has arranged to grant a bounty of 37 cents per bale on the export of yarn to other places (Hong Kong inclusive) than China, this to be in place of the prize tickets so far as the non-Chinese places were concerned.

AMERICAN GOODS IN TASMANIA.

IMPORTS OF MERCHANDISE INDICATE LINES FOR EXTENSION.

Consul Henry D. Baker, of Hobart, in presenting the returns compiled for him by the collector of customs for Tasmania, showing the principal articles with their values imported into Tasmania from the United States during the calendar year 1907, writes:

The figures do not include American goods imported indirectly through Melbourne and Sydney, the greater part of Tasmania's business with the United States being conducted through general agents in those cities. The import figures are of interest as showing more the classes of goods which Tasmania buys from the United States than the quantities which are bought, and are impossible to fully ascertain owing to the fact that the States of New South Wales and Victoria are credited with a large part of the goods eventually consumed in Tasmania.

A perusal of the articles enumerated may be beneficial to American manufacturers as indicating along what lines and in what classes of goods there may be opportunities for extension of American trade.

Articles.	Value.	Articles.	Value.
Apparel	\$4,896	Typewriters	\$583
Cartridges	3,849	Tools, hand and machine	17,145
Arms	2,840	Medicines	8,591
Blacking and dressing	403	Metals, manufactured	13,059
Books, printed	847	Nails	3,713
Boots	2,910	Pipes, iron	3,046
Brush ware	910	Plated ware	4,502
Clocks	5,163	Wire	4,511
Cutlery	788	Paints	6,156
Electrical materials	1,489	Paper and manufactures	14,113
Fancy goods	2,355	Paper hangings	1,913
Fish, preserved	7,658	Perfumery	1,060
Furniture	7,850	Piece goods	7,383
Glassware	472	Resin	1,435
Agricultural implements	25,579	Sausage casings	1,586
Reapers and binders	6,927	Soap	3,265
India rubber goods	730	Stationery	1,352
Musical instruments	1,781	Timber	31,380
Iron and steel rods and bars	1,017	Tobacco	25,584
Galvanized iron	885	Cigars and cigarettes	676
Jewelry	730	Varnishes	508
Lamp ware	1,971	Vehicles and parts	3,835
Leather	876	Watches	1,065
Leather manufactures	886	Manufactures of wood	3,838
Cream separators	2,511	Ax handles	4,774
Engines	11,067	Other articles	15,026
Boilers	10,550		
Machinery	5,690		
Sewing machines	4,861	Total	291,533

AMERICAN STAMPED GLASSWARE.

There is a good market in Tasmania for American stamped glassware, but its sale might be materially increased if the Tasmanian importers were subjected to less loss from breakage due to faulty packing on the part of the American manufacturer. The breakage appears to average about 10 per cent of the amount of the goods imported, as against about 5 per cent on competing German glassware of the same sort.

Some of the agents who supply the local market with American stamped glassware decline to break cases in selling to local consumers, as they are afraid of the possibility of even a much more than 10 per cent of breakage after the opening of the cases. One dealer tells me he would rather sell American glassware at 15 per cent profit in

unbroken lots than at 25 per cent profit on broken lots, as he would rather sell to the consumer at a less price, but let the consumer take the risk, than to sell at a greater price and he himself take the risk from breakage. American styles of stamped glassware appear to be in good favor with the local trade at about \$1.30 per dozen. The glassware most in request includes plates, fruit dishes, butter and cheese dishes, and dishes for "sweets" or cakes and confectionery. No American tumblers to my knowledge are sold here. The German and Austrian tumblers, invoiced at about \$1.50 a gross, have a practical monopoly of the local market.

TARIFFS ENCOUNTERED.

The duty under the new Australian tariff act on American stamped glassware is 25 per cent ad valorem, with a reduction of 5 per cent ad valorem in favor of imports from Great Britain. As there is little or no local competition, however, in the manufacture of stamped glassware, and not much prospect of any, the high tariff need not deter American manufacturers from attempting to further exploit their trade in this country. By more careful packing of their goods, eliminating the waste from breakage, the extra cost from the tariff might be overcome. Also American manufacturers must not make the mistake of sending the most expensive grades of glassware to this country, as they will not meet with ready sale. Ordinary stamped glassware is looked on as a good deal of a luxury, but desirable in every home.

Large profits are made on American stamped glassware by the Australian agents who have made it a feature of their business. If American manufacturers had direct agencies in Sydney and Melbourne and traveling men of their own who would thoroughly canvass all the States of the Commonwealth, including Tasmania, they would doubtless greatly increase their profit from this trade.

COAL IN THE MEDITERRANEAN.

A MARKET AWAITING SYSTEMATIC EFFORTS OF OUR COAL EXPORTERS.

Reverting again to the great demand for coal by the Mediterranean Sea ports, Consul-General Robert P. Skinner, of Marseille, makes the following suggestions for the solution of the freight problem involved in the trade:

There is a market in Mediterranean Sea ports for standard American coal if it can be laid down on this side on terms very slightly better than those of English shippers. Marseille has received and marketed 250,000 tons of American coal in one year. But under more active home trade this market was neglected. Ultimately, American coal will come to this market in large quantities, but the problem will not be solved until either the miners of our coal or the American railroads make the ocean freight rates themselves. The enterprise should be undertaken upon a large scale, vessels being secured under long-time charters or owned outright. Railroads of the United States might find it advantageous to give shippers the benefit of a low through rate to Europe for the sake of the land tonnage which they would obtain, and the steadying influence of foreign markets to which coal could be shipped and stored during the dull season at home.

COTTON GOODS IN THE EAST.

CHINA.

INTERIOR SOUTHERN CITY PURCHASES LARGE QUANTITIES.

The British consul at Wuchow (180 miles west of Canton) has forwarded the following particulars of the import trade in cotton piece goods at that Chinese port during the year 1907:

There was a decline in the import of cotton piece goods during 1907, owing to lack of facility in financial arrangements and the loss of the native opium trade at Nanning, together with the curtailment of the credits formerly granted to Wuchow merchants by the Hongkong native dealers; nevertheless a steady and non-speculative business was carried on. Gray shirtings show a falling off, the import for 1907 being given as 72,660 pieces, as compared with 93,969 pieces in 1906. The 8½-pound grades have decreased the most, their place having undoubtedly been taken by light-weight shirtings. The material, which is unbleached, is used by the Chinese for clothing, and for this purpose it is very often dyed blue with indigo in Wuchow and in the surrounding districts. A considerable decline in the import of gray sheetings is also to be observed. The Hupeh productions are now coming into favor, and these can be laid down at Wuchow more cheaply than either the Manchester or the American cloths. In white shirtings a larger variety of qualities is now being imported, and the trade is not, as in former years, confined to a few extra heavy cloths. The local consumption of gray T-cloths and of fancy goods in 1907 was about up to the average, but, on account of the loss of the native opium trade and of interprovincial financial facilities, there was a large decrease in the quantity intended for distant interior markets. Though the customs returns show an import of 28,810 pieces of plain dyed shirtings in 1907, no such article comes into the port; this remark applies to foreign-dyed shirtings and not to Hongkong-dyed shirtings, the figures for which are given separately. The proper classification would probably have been under the headings of cotton Italians, cashmerettes—an imitation of cashmere manufactured in Manchester—brocades and cotton lastings, both plain and figured. These are of various qualities, ranging in price from 42 to 81 cents per yard, with a width of 30 to 31 inches, and are very different from the ordinary shirting or calico dyed in indigo and of a width of 36 inches; 25,193 pieces of Hongkong-dyed shirtings are said to have been imported during 1907. In the dyeing of these, pure indigo dye is employed. There was apparently a very great increase in the quantity of Japanese cotton cloth imported, the figures for 1907 having been 43,268 yards, as compared with 7,784 yards in 1906. The cloth is made up in small pieces of 9, 12, or 15 yards of very narrow width. The import of Japanese cotton crape shows a very great decrease. The figures for 1906 were 195,861 yards and the figures for 1907 only 24,921 yards. The figures given for 1906, however, are erroneous, crimps from Manchester and striped twills with raised back from Japan having possibly been included under the heading of Japanese cotton crape. There would seem to be little doubt that this last-named article, chiefly owing to its lack of durability, is rapidly going out of the market.

PERSIA.

INCREASED IMPORTS LAST YEAR.

The British consul at Bunder Abbass, writing on the trade in cotton piece goods at that Persian Gulf port in 1907, states that the depression of 1906 was followed by a brisk demand during the past year. The United Kingdom supplied piece goods of all kinds to the value of \$514,953, as against \$278,661 in the previous year. India showed a slight decrease, from \$120,436 to \$120,256. Russian prints of 24 inches wide enjoyed a limited sale at 1 kran (9 cents) per yard, and increased from \$15,524 to \$28,771. These are mostly colored designs on a red ground, and are used by Persian women of the peasant class for making underclothing. There was a greatly increased demand during 1907 for cotton and jute yarns, the United Kingdom and India jointly showing an increase from \$328,114 to \$505,123.

ARTIFICIAL FERTILIZER POSSIBILITIES.

CHINESE ARE NOW RESORTING TO ARTIFICIAL SOIL RESTORERS.

Vice-Consul Ernest Vollmer submits the following report from Tsingtau on the opening presented in China for the sale of fertilizers:

The rich alluvial soils of Shantung and other Chinese provinces have been worked for so many generations now that the time when artificial fertilizers must be used in order to obtain good crops is rapidly approaching. Unlike most places having similar soil composition, China could postpone this era of manuring longer than would be possible in other parts of the world. The provinces in the great valleys of the Yangtze and Yellow rivers are often flooded, and an enriching of the soil takes place identical to that of Egypt from the overflow of the Nile.

In the northern provinces another important factor must be counted on. All of the provinces of Shantung north and from the Desert of Gobi eastward to the ocean are subject to terrific sand and dust storms. The statement is made that around tombs and other places where the soil is not disturbed the annual deposit of these storms can be distinctly traced for ages, layers of an eighth of an inch being the minimum for any season. Thus the soil is enriched by floods in one part of the country and by sand storms in other parts, the latter being very much less efficient.

Aside from these natural means of retaining the producing qualities of his land, the Chinese farmer uses every means at his disposal to enrich his acres. A regular rotation of crops is in vogue, and every second or third year the land is summer fallowed and allowed to remain unused. Manure of all sorts is gathered and carefully distributed, and artificial fertilizers are coming into use. The greatest loss of strength to the soil probably comes from the fact that all vegetable matter is gathered and used for fuel, so that what the ground has once given up to plant life is lost to it forever.

TRIALS OF EUROPEAN AND AMERICAN FERTILIZERS.

European firms have made attempts to introduce chemical fertilizers into this district. Their efforts can not be described as successful. The plan adopted was to sell the ingredients to the natives, tell them in what proportions they were to be mixed, and in what quantities the mixture should be applied to various kinds of soil. The main difficulty of the plan was that of securing proper mixing of the ingredients by the Chinese farmer. The chemical compounds tried burned the plants as soon as a drought set in. As Shantung is likely to have dry spells and rain is seldom plentiful, this proved another serious drawback.

A start in the right direction is now being made by an American packing house. Several hundred pounds of fertilizer, blood scrap, and bone have been sent here for free distribution among native farmers. Prices are reported to be within the reach of the better situated agricultural people, the mixture is adapted to any soil, and it will not burn crops. Some small orders are already resulting, and should the tests prove satisfactory, a market with unlimited possibilities will doubtless be opened. A good fertilizer, comparatively cheap, which needs little or no scientific knowledge in its application, is one of the great needs of China, and once successfully introduced will grow into a leading import throughout the Empire.

CAMPHOR IN SOUTH CHINA.

PLANTING MOVEMENT IS FOSTERED BY THE BOARD OF AGRICULTURE.

Vice-Consul-General George E. Chamberlin forwards from Singapore the following extract from an article appearing in the Straits Times:

New developments are reported in South China in connection with the camphor trade. Travelers have long known that there are many groves of camphor trees on the North River, and especially throughout the Kuk Kong Hsien. As they are needed for making furniture and boxes, these trees have in the past been felled and sawed up into planks, though apparently the trade has not been very extensive when the number of trees and their age is considered. Some of these groves contain many trees of huge growth, and they must have been there for centuries. One small town is called Camphor Tree Town.

It appears that the board of agriculture sees that there are considerable possibilities in the situation, and there is a move on foot to endeavor to start a trade in camphor that shall be useful to the people themselves, by giving them employment, and also for the purpose of trade generally. Already efficient persons have been sent to examine into the possibilities, and they have reported favorably. One of the plans of the board is to prepare the camphor for the market on the spot, and it is reported that 100 men who are familiar with the way in which camphor is prepared are being engaged for this purpose.

PUBLICATION ANNOUNCEMENTS.

A limited supply of the monograph on the "Asphalt of Trinidad," prepared by the American consul on that island and published a few years ago, are in possession of the Bureau of Manufactures, from which they may be obtained by interested persons.

The last edition of "Annual Commercial Relations of the United States for 1906" has become exhausted and can no longer be supplied. Persons having copies of this volume for which they have no further use are invited to return them to the Bureau of Manufactures, which will forward franked envelopes for the purpose.

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MACHINES AND TOOLS.

FRANCE.

AUTOMOBILES AND CONSTRUCTION TOOLS—AMERICAN SHOPS REPRESENTED.

Special Agent Capt. Godfrey L. Carden, writing from Paris, June 6, describes a visit to a large automobile works in the following report:

The automobile works of A. Clement are located on the Quai Michelet, Levallois. This firm manufactures the machine known as "Bayard," and has about 1,100 men on the pay rolls, which force is confined to the Paris shops. An additional 800 men are working in the branch shops in Messieres. Through the courtesy of Mons. A. Clement, I was afforded every opportunity to inspect the machine-tool installation in the Levallois works, in which were found American machine tools in service from the following firms:

Ohio Machine Tool Company, Kenton, Ohio, lathes; Brown & Sharpe, Providence, R. I., full line of tools; Mark Flather & Co., Nashua, N. H., lathes; Pratt & Whitney, Hartford, Conn., engine and turret lathes and millers; Baker Brothers, Toledo, Ohio, automatic tapping machines; Powell Planer Company, Worcester, Mass., planers; Potter & Johnston, Pawtucket, R. I., automatic turret turning and chucking machines; National Separator and Machine Company, Concord, N. H., 4-spindle drill press; Jones & Lamson, Springfield, Vt., automatic turret lathes; M. F. Company, Millers Falls, N. Y., saws; J. E. Snyder & Co., Worcester, Mass., drills; Baush Machine Tool Company, Springfield, Mass., multiple spindle drills; Perkins Machine Company, Boston, Mass., hand presses; Fellows Gear Shaper Company, Springfield, Vt., shapers; Gisholt Machine Company, Madison, Wis., turret lathes; Landis Machine Tool Company, Waynesboro, Pa., grinders; Becker-Brainard Milling Machine Company, Hyde Park, Mass., millers; William Sellers & Co., Philadelphia, slotter; Hendey-Norton Company, Torrington, Conn., lathes; Warner & Swasey, Cleveland, Ohio, turret lathes; Watson-Stillman Company, New York, hydraulic press; Lapointe Machine Tool Company, Boston, Mass., broaching machines; many of the chucks in use are from D. E. Whiton Company, New London, Conn., and from Cushman.

I estimated that there are at least 30 Flather lathes in service. These tools are well liked. The French automobile shops when installing American lathes have usually confined themselves to one make. W. F. and J. Barnes's drills I have found in service as boring mills in connection with jigs. These tools were referred to as doing satisfactory work very cheap. The Ohio Machine Tool Company's tools were turning down four-cylinder crank shafts, and were com-

pleting the work at a labor cost of 25 francs per 50-horsepower engine. The Watson-Stillman hydraulic press was referred to as a very good machine.

I asked for a frank criticism of American lathes and the reply was that such tools are too light for the new high-speed steels, and that they must be made heavier. The opinion was expressed that the gears on the American lathes, as a rule, are too light and too small in diameter, and that the countershafts are very faulty. In many instances the pulleys, it was declared, are too small and have insufficient driving power. There results in consequence a necessity for keeping a very tight belt.

Among the foreign tools present I observed the following:

Boring tools from Ernault, Paris; grinders from Mayer & Schmidt, Offenbach, Germany; grinders from Webster & Bennet, Coventry, England; millers from J. E. Rhelnecker, Chemnitz; boring tools from Boehringer Frères, Göttingen, Germany; circular milling machines from Lud. Loewe, Berlin, Germany; gear rounding machines from Lejeune, of Paris; gear cutters from Biarnatzki & Co., Chemnitz, Germany; turret lathes from Alfred Herbert (Limited), Coventry, England; millers from Bariquand & Marre, of Paris; grinders from C. Churchill & Co., of Coventry, England; woodworking machines from Panhard & Levassor, of Paris.

RELATIVE MERITS OF TOOLS.

The Ernault borers are regarded as especially good for aluminum work as called for on automobiles, because of the long bed. I understand that the Clement works during the busiest times have employed about 1,400 men in the Paris shops. It will be observed that with 1,100 men now at work the shops are anything but quiet. The total number of machine tools installed on the Clement floors is approximately 900. The firm maintains a special department for tool repairs and for making special tools, such as are demanded by the peculiar character of the work of the shops.

I observed that the differential and axle boxes being worked are of French malleable iron. A. Clement criticises the American malleable iron as being rather black and of a character tending to crumble. The malleable iron is adhered to in the construction of these boxes, since aluminum would not be strong enough for the work.

The Fellows gear shapers were referred to as exceedingly good machines for gearing and short work.

THE CLEMENT ENGINE.

I was informed that the cylinders for the Clement engines are all of French make, and that quite a number of these cylinders of the same make are sent to the United States for working up into American automobiles. I find that Clement bends all his exhaust tubes cold, without any inside strutting. He uses a French machine for this work, the design of Monet & Moine, of Paris. This tool, I was informed, saves about 200 per cent over hand work. All Clement engines under test are run 15 hours under the belt, and 2 hours under full load on the dynamo break. The dynamo break machines of Hillairet Huguet of Paris are used.

MOTORS FOR MILITARY SERVICE.

This establishment has taken up the work of making gasoline motors for direct connecting to dynamo. Only small installations are manufactured, the powers ranging from 5 horsepower to 30

horsepower. Still another branch of work is the making of engines for dirigible balloons. One engine under construction has four cylinders and is designed for 120 horsepower. Clement has a first-class testing track built within the confines of his works. The roadway consists of concrete to a depth of $1\frac{1}{2}$ feet covered with a light layer of small granite stone, laid with tar and asphalt mixed, and the whole covered with asphalt. The track has been in service ten years and is still in splendid condition.

I observed two automobiles under construction in the Clement shops for military service. Each vehicle will carry two machine guns, mounted one on either side, about midway of the four and a half length of the chassis. When not mounted the guns will be slung in pouches over the sides of the car. An armed automobile is now in service with the French troops operating in North Africa.

MEN AND WAGES.

The impression which a visitor receives on visiting the Clement works is most favorable. The shop administration is of a high order, and it is apparent that the men in charge of the various departments thoroughly understand their business. There is a good speed maintained on all tools, and the workmanship throughout the plant is of high standard.

Lathe men are paid on an average 80 centimes per hour. The maximum received by lathe men is about 1.20 francs per hour. Payment is by piecework, the men at the milling machines receive on an average between 80 and 85 centimes per hour, and the maximum does not exceed 1.20 francs. The men at the grinders receive on an average 90 centimes per hour, and a maximum of 1.20 francs. The same statement applies to blacksmiths and coppersmiths. The men working at the drills, slotters, and planers average about 80 centimes per hour. The maximum for all three tools is 1.20 francs per hour.

CANADA TAKING COAL.

FACILITIES FOR HANDLING AND STORING THE FUEL ARE IMPROVED.

Consul Martin R. Sackett, of Prescott, makes the following report on the enlargement of the coal depot at that place for supplying fuel to the Grand Trunk and Canadian Pacific railways:

Prescott has, of late, become something of an entering point for American coal. Last year, during the time in which navigation of the St. Lawrence River was practicable, 300,000 tons of coal was landed here by one firm of dealers which has the contract for supplying coal for the use of the Grand Trunk and Canadian Pacific railways.

A large plant with modern appliances for unloading coal from barges and loading the same upon cars was installed here two years ago, and during the past winter its capacity was enlarged 50 per cent, making it possible to discharge two cargoes per day. This coal is of the soft variety, coming by rail to Charlotte, N. Y., where it is loaded upon steam barges for Prescott. A barge can make three trips per week, carrying from 1,200 to 2,000 gross tons per trip. An elevated railway leading from the barges to storage yards, having a capacity of 100,000 tons, is in the course of construction.

BELGIUM IN THE FAR EAST.

LAYING A SURE FOUNDATION FOR FUTURE INCREASE OF TRADE.

Consul H. Abert Johnson, of Liege, gives an account of the special effort that Belgium is making to advance its commercial interests in the Orient:

In recent years Belgium has displayed decided energy for the expansion of her already important trade with the Far East, and the relatively conspicuous position she now holds among the European nations whose rivalry for commercial supremacy in that quarter of the globe is of the keenest shows that her efforts have not been exerted in vain. The Belgian Government intends to participate in the International Exposition at Tokyo in 1912, and will, it is asserted, use every endeavor to make Belgium's exhibit one of special prominence.

The Government has also decided to install its diplomatic and consular representatives in the Orient in more imposing quarters. A splendid new building for the Belgian legation at Peking is now nearing completion, ground has been broken at Shanghai for an imposing consulate-general, while at Tokyo a similar building is to be erected. At Seoul, the Korean capital, a new residence has lately been built for Belgium's diplomatic representative. These undertakings on the part of the Belgium Government necessitate considerable increase in the annual budget, but such expenditures are looked upon by the business element of the Kingdom as an excellent investment for the nation.

BELGIUM BECOMES ACTIVE IN CHINA.

It is only since 1896 that Belgium has made serious efforts to enter the field of commercial activity in China. During that year the Belgian minister at Peking notified his Government of the possibility of a Belgian firm being awarded the contract for building the Peking-Hankow Railway line. The Belgian minister of foreign affairs immediately called together a group of financiers and manufacturers of railway material to look into the question. This meeting resulted in the organization of the Société d'Etudes de Chemin de Fer en Chine, that at once took the matter in hand. Important orders were given to Belgian firms for railway rolling stock and other material, and this proved to be Belgium's initial move in the expansion of her trade with the Far East. Prior to 1905 the efforts made by Belgians to foster closer commercial relations with China, being largely confined to the action of single individuals or firms acting independently, were not productive of results in keeping with the immense possibilities offered by the Chinese market, and at the same time were far from doing justice to Belgian commercial and industrial activity.

The subsequent agitation in the commercial world, brought about by a full realization of these conditions, led eventually to the organization in Brussels of the Chino-Belge Chamber of Commerce, an institution having for its object, primarily, the grouping together of all interested industries and assisting in every possible manner in developing and fostering their relations with the Orient. Supplying manufacturers and commercial bodies with information relative to the important markets of the Celestial Empire, pointing out the kind of goods likely to meet with favor and the prices for which such goods could be readily sold, emphasizing the numerous

opportunities for developing oriental trade, encouraging a spirit of initiative on the part of Belgian industrial interests in taking advantage of these opportunities, supplying the Chinese merchants with information that would facilitate the exportation of their products into Belgium, and the purchasing in that country of goods that could find a ready sale in China, are among the leading aims of this Chinese-Belgian Chamber of Commerce, fostered through the intermediary of its official organ, entitled "Chine et Belge." This review, published monthly, contains much useful information, and is expected to prepare the way for a vast army of Belgian manufacturers and merchants to form new trade relations. Its policy will be to strive unceasingly for the rapid development of closer commercial relations with China, and to this end it will energetically advocate the creation of an effective merchant marine, without which it is claimed all profitable expansion of trade beyond the seas is but a visionary dream, not in harmony with the views of any of the serious and intelligent business men of the country.

ALSO AFTER JAPANESE TRADE.

Another association, founded on similar lines, for fostering trade relations with Japan is the Société d'Etudes Belgo-Japonaise. The special pains taken by Japan at the Liege Exposition in 1905 to make her section prominent is considered as indicating a strong desire to enter into more intimate commercial relations with Belgium.

The society has sent a representative to Japan. As a basis for his investigations the society asks its members to indicate the special subjects in which they may be individually interested, so that a complete set of interrogatories may be submitted such as will be of value in furthering the interests of increased trade with Japan. It is said that the information embodied in the replies to these inquiries will, doubtless, clearly illustrate a fact perhaps already too well known in some quarters, that Belgian products are now extensively sold in Japan, but that in most cases such sales are made by other than Belgian houses, and that an extremely small percentage of such products find their way into Japan by means of direct importation from Belgium. That the Japanese are favorably disposed toward the products of this country can hardly be doubted, in view of the increasing number of orders for such products by Japanese merchants.

SCIENTIFIC-ECONOMIC ACTIVITIES.

During the preliminary period of research and study the office of the secretary-general of the association proposes issuing a monthly bulletin, published in the interests of Belgian exporters, entitled "Japan et Belgique." This publication will be directed on similar lines to "Chine et Belgique," the official organ of the Chinese-Belgian chamber of commerce. It may be added that the advertising department of this publication is to receive special attention. The advertisements alone, translated into English and Japanese, make up an attractive volume, and a large number of copies have been sent to the society's representative at Yokohama, through whom they have been distributed to the leading Japanese firms who are in position to make business connections with Belgian firms.

This method of advertising has, it appears, proved highly satisfactory, and the agent of the society writes that he has already been

approached by numerous visitors plying him with the most diversified kinds of questions in regard to the industries of Belgium.

The work of the Société d'Etudes Belgo-Japonaise will include Formosa, Korea, and Manchuria. Owing to the success of the two organizations mentioned, others of similar scope have been recently formed, such as the Société Belgo-Russe and the Société Belgo-Persane.

GRECIAN BEET SUGAR.

FACTORY OWNERS RAISE THEIR OWN SUPPLY OF BEETS.

Consul-General George Horton, writing from Athens, gives the following account of the obstacles encountered in the beet-sugar industry in Greece:

The beet-sugar industry in Greece is controlled by the brothers George and Solon Christaki Zographos, whose headquarters are at Lazarina, Thessaly, where their factories are also located. About 1,000 acres are cultivated, but this area keeps the factory running only about two months out of the year. Herein lies one of the chief obstacles to the manufacture of beet sugar in Greece. The area of cultivation can be increased only by turning small crofters out of their holdings, for it is difficult to induce the peasants to try any new crop or to cultivate it according to new methods. All the beets now obtainable are raised by the factory owners. The land is prepared as for turnips, and the seed sown in drills at the end of March or mid-April, and the crop is gathered in July. The cost per long ton of the beets ranges from \$10.90 to \$14.50, delivered at the factory. The beet land is a loose, loamy, open soil. Irrigation is depended on, the spaces between the drills being flooded three or four times during the season.

The machinery of the works was installed by a French firm and has a capacity of 20 tons of sugar in twenty-four hours. The quality of the sugar is poorer than that of the imported article, and sells somewhat lower. Sugar retails in Greece at 11 cents per pound. The duty is about 5 cents per pound. No sugar is exported.

The principal by-products are the pulp, which after being squeezed is used to feed cattle, and the molasses, which, mixed with chopped straw, is used for the same purpose. The coal used costs about \$11 per ton, and the limestone for making carbonic acid gas 75 cents to \$1.10 per cubic meter (cubic meter=35.314 cubic feet).

New British Ice Freezer.

Consul Albert Halstead, of Birmingham, states that the invention of a new British ice-making machine is reported which works on the principle that water will freeze when evaporated rapidly by a vacuum pump and a powerful absorbent, such as sulphuric acid. It is said that the machine can be worked by hand and will turn out carafes of iced water at the rate of one in three minutes and blocks of ice weighing about 1 pound in twenty minutes. The apparatus, consisting of the absorber and the carafe, or the ice mold, are rocked by means of a handwheel and crank, which serves also to create the vacuum. This apparatus is made at Reading, England.

PROGRESS IN TRANSPORTATION.**UNITED STATES TO BRAZIL.****FACILITIES FOR PACIFIC COAST SHIPMENTS TO RIO DE JANEIRO.**

Consul-General George E. Anderson, of Rio de Janeiro, advises that in connection with the establishing of a round-the-world passenger and freight service by a French line of steamships a large passenger and freight steamer is to sail from San Francisco down the west coast of South America, through the Straits of Magellan, and up the east coast of South America to Pernambuco, stopping at the principal ports. He adds:

This steamer service will be afforded once each six weeks for the present, naturally being increased in frequency as business justifies. The service is important to the Pacific coast interests of the United States in several respects. The dried-fruit trade, for example, ought to be given a good opportunity to get into this market by the convenience of making direct shipments in a modern steamer, something heretofore impossible.

There may also be something of an opportunity for lumber interests of the Pacific coast, for its flour mills, wineries, and other interests. The service in no way is to be compared with that for similar goods from Europe at the present time, but offers an opening which should be watched. Some dried fruits from the United States are sold here, but there has been much complaint of packing and condition, and the freight, after a transcontinental trip and transshipment, is a material item in the trade. The new service may avoid all such troubles. Practically no American wine is now sold here, and direct shipment facilities may afford the opportunity.

At present the steamship service referred to is all one way, and direct shipments from Rio de Janeiro to San Francisco are not to be had by it.

CANADA.**PLANS FOR IMPROVING TRANSPORTATION FACILITIES.**

Consul E. A. Wakefield reports from Orillia that necessity for constantly improving and increasing Canada's rail and water transportation lines was the keynote of a recent address by the Canadian minister of railways and canals at Galt, Ontario, which is outlined from newspaper reports as follows:

His argument was in favor of a policy which will enable Canada to fulfill her great destiny, placing her in the forefront of the nations of the world. He announced that the government were determined that Hudsons Bay should be linked up with the railway system of the country, and thus an additional outlet afforded for the commerce of the ever-growing West. He also dwelt on the importance of the scheme of solving the great transportation problem, the building of the Georgian Bay Canal, and the deepening of the Welland Canal to 25 feet, or the cutting of an entirely new waterway capable of accommodating vessels of that draft. He pointed out that the construction by the State of New York of the new Erie Canal would reduce

the cost of transportation of wheat to New York to 3½ cents a bushel. That would deprive Montreal of an advantage now enjoyed, and which has resulted in the transfer of a large traffic to the Canadian port. A Welland Canal which could be navigated by vessels drawing 25 feet would reduce the cost of transportation to Montreal to 3½ cents per bushel and help to keep Canadian trade in Canadian channels.

UNITED STATES AND JAMAICA.

STEAMSHIP SERVICE BETWEEN GALVESTON AND KINGSTON.

Consul F. Van Dyne, of Kingston, reports that he is in receipt of a communication from the Galveston Chamber of Commerce stating that the United States Shipping Company announced that from about July 15 they would establish a monthly steamship service between Galveston and Jamaica. It is further stated that the frequency of the sailings will be increased as rapidly as the business justifies.

SHANTUNG LACE MAKING.

WORK OF CHINESE GIRLS SUPERINTENDED BY MISSIONARIES.

Transmitting samples of silk and thread lace, pongee silks, and an illustrated catalogue of laces, silks, and drawn work, from the agents of the Chefoo Industrial Mission, Vice-Consul Ernest Vollmer, of Tsingtau, reports thereon as follows:

With a view of furnishing home work to a large number of native converts, missionaries in Shantung years ago taught converts lace making. The industry is carried on more or less throughout the silk districts of Shantung, the center probably being in the Chefoo region. Under careful foreign supervision these products have gained a very high standard of quality, and are comparatively cheap. A large variety of laces, collarettes, ties, mantillas, doilies, and drawn work are prepared mainly by Chinese girls, and sold through the mission stations.

Aside from the handmade products enumerated thread laces are also made, and a trade carried on in plain, patterned, and dyed pongees in pieces. Retail sales are made to all parts of the world. An export duty of 5 per cent ad valorem is collected on all goods leaving China. [Samples and catalogue on file in the Bureau of Manufactures.]

Improving the Manufacture of Habutae in Japan.

Consul-General Henry B. Miller reports from Yokohama that the Fuji Gas Cotton Spinning Company is said to have engaged the services of a French weaving expert at a salary of 60,000 francs (\$11,580) a year for a period of three years. The motive of this step is to improve the manufacture of habutae (fine Japanese silk), for which staple a great market would exist among the Parsees of India if certain imperfections which now render the Japanese product inferior to the French could be remedied. This company by strenuous exertions is said to have succeeded in securing a strong foothold for its gassed yarns in India, and it now aims at a similar success in the field of habutae.

MINING INDUSTRY.

GERMANY.

GREAT IMPORTANCE OF THE MINERAL PRODUCTION OF THE EMPIRE.

Vice-Consul Walter A. Leonard, of Kehl, states that, according to a reliable industrial journal, the total products of the mines in Germany for the year 1907 are represented by 242,609,000 metric tons (metric ton=2,204.6 pounds). The details regarding the industry are given as follows:

The hugeness of these figures can perhaps be better understood by a comparison with the total grain harvested in the same year, which amounted to only a trifle more than 13,000,000 metric tons, and all the goods exported from and imported into Germany during the same period of time would not be represented by half the sum of these mine products.

The development of the German mines has taken place mainly within the last twenty years. In 1889 the 100,000,000 mark had not been reached, and since 1895 the total amount of products from the mines has more than doubled. During 1899 and 1900 the increases were especially noteworthy, and in 1906 it rose to 227,000,000 tons and in 1907 to more than 242,000,000.

COAL MINING FAR IN THE LEAD.

The most important branch is coal mining, the same representing about 85 per cent of the total products of the mines. In Germany it is customary to divide coal into two great classes, based upon differences in color rather than hardness, viz, brown coal (braunkohle), corresponding to the English term lignite, and black, or stone coal (steinkohle), which is equivalent to coal as the word is used in the United States. Lignite has a composition similar to peat, usually with the addition of some animal remains, being a compact mass of plants, the degraded vegetable tissues making a paste-like formation which has not yet passed through a sufficient number of geological changes to have become coal.

Considerably more lignite is claimed to exist in Germany than in any other country, and the increasing output of the same in recent years, compared to coal, can be seen from the following table:

Description.	1895.	1906.	1907.
	<i>Metric tons.</i>	<i>Metric tons.</i>	<i>Metric tons.</i>
Coal (steinkohle).....	79,169,000	137,118,000	143,168,000
Lignite (braunkohle).....	24,788,000	54,419,000	62,569,000
Total	108,957,000	191,537,000	205,727,000

Notwithstanding the fact that during the last twelve years the supply of coal in Germany has nearly doubled, the market price, instead of decreasing, has advanced nearly 50 per cent. Working out an average price at the mine it is shown that coal has advanced from \$1.62 per metric ton in 1895 to \$2.32 in 1907. The price of lignite has not perceptibly advanced, being 56 cents per metric ton in 1895 and 60 cents in 1907.

The ores mined in 1907 amounted to 29,610,000 metric tons, against 28,620,000 tons in 1906. Of this amount 27,700,000 tons in 1907 and

26,730,000 tons in 1906 were iron ore. The average price of a metric ton of iron ore was 3.84 marks (\$0.91) in 1906, against 4.3 marks (\$1.02) in 1907.

The quantities and values of the other ores taken from the mines in 1907 were as follows:

Ores.	Metric tons.	Value.	Ores.	Metric tons.	Value.
Zinc	698,425	\$10,065,734	Pyrites	196,320	\$409,836
Copper	771,227	6,304,620	Gold and silver.....	8,280	267,968
Lead	147,272	4,791,416			

Arsenic, manganese, vitriol, and alum are also mined in Germany, but only in small quantities and values.

The production of salt in 1907 was over 7,000,000 metric tons, with a value of \$17,324,020. Mineral salt (rock salt) amounted to \$305,863, and saltpeter (nitrate of potash) to \$1,363,349.

While the amount, in tons, of mining products has approximately doubled in the last twelve years, the value of the same has advanced more than two and one-half times, or, more accurately figured, 161 per cent. Tracing the increased products and their value since 1895, we have the following results, reduced to metric tons and American currency, respectively:

Year.	Metric tons.	Value.	Year.	Metric tons.	Value.
1895.....	120,294,000	\$168,147,000	1906.....	227,146,000	\$689,629,800
1900.....	174,667,000	300,641,600	1907.....	242,609,000	439,086,200
1905.....	205,593,000	337,412,600			

In further studying the development of the mining industries it is an interesting fact to note the tendency toward combinations of capital, thus reducing the number of mining companies. This is shown by the following table, making a comparison of the years 1873 and 1905, the latter date being the last one for which figures are available:

Description.	1873.	1905.
Number of mining companies.....	4,813	1,862
Average output of each company.....tons..	12,522	110,415
Total number of workmen.....	289,756	661,310
Workmen to each company.....	67+	355+
Capacity of output for each workman.....tons..	186+	311-

CHILE.

REDUCED EXPORTATION OF NITRATE OF SODA DECIDED UPON.

Consul Rea Hanna, of Iquique, reports that with the evident intention of bettering the price of nitrate of soda the nitrate combine in Chile has decided to limit the exportation of nitrate for the year ending April 1, 1909, to 47 per cent of the original quota. The consul continues:

At the formation of the combination the total quota was fixed at 77,132,000 Spanish quintals (Spanish quintal=101.41 pounds). This figure was augmented by the opening of five new plants, so that the theoretical quota at present is 81,082,000 Spanish quintals, or 8,238-

742,020 pounds. The total exportation for the coming year is limited to 39,500,000 Spanish quintals (4,013,595,000 pounds), a reduction of 53 per cent from the original quota. Of this amount 85 per cent may be exported between April 1 and December 31, 1908.

When this announcement was made a slight rise was noticed in the price of nitrate, but it lowered immediately afterwards, and up to June 1 had failed to rally, present delievery bringing about \$1.80 per quintal on board, so that the market continues dull.

UNITED KINGDOM.

OUTPUT OF THE MINES AND QUARRIES OF SOUTHWEST ENGLAND.

Consul Joseph G. Stevens, of Plymouth, makes the following report upon the mining industry in southwest England during the past year:

In the county of Cornwall in 1907 there were 88 mines worked, employing 8,533 persons, an increase of 1,418, and in Devonshire the number of mines worked was 24, employing 687 persons, an increase of 28. The output of minerals in each region was as follows:

Minerals.	Cornwall.	Devon.	Minerals.	Cornwall.	Devon.
	<i>Tons.</i>	<i>Tons.</i>		<i>Tons.</i>	<i>Tons.</i>
Arsenic	1,368	129	Tin, dressed	6,008	94
Arsenical pyrites	207	482	Wolfram	250	.....
Clays .....	.....	68,322	Zinc blende	450	.....
Copper ore	2,802	652	All other	75	34
Iron ore	50	482			
Stone .....	.....	869	Total	11,205	71,014

In Cornwall there were 389 quarries operated, employing 6,091 persons, and in Devon 441 quarries, employing 2,243 persons. Their production is shown in the following table:

Minerals.	Cornwall.	Devon.	Minerals.	Cornwall.	Devon.
	<i>Tons.</i>	<i>Tons.</i>		<i>Tons.</i>	<i>Tons.</i>
Barytes .....	.....	1,300	Mica	14,615	.....
Chert and flint	380	13,248	Ocher and umber .....	.....	1,200
China clay and stone	707,233	75,378	Sandstone	11,330	62,378
Clay	30,610	216,916	Slate	18,492	5,417
Granite	247,090	131,008	Flint block	80	.....
Gravel and sand	1,116	26,187			
Limestone	303	543,234	Total	1,081,249	1,076,266

It is claimed that there are not a half dozen mines in southwest England that are being operated on a paying basis. There is still an increase in the number of deaths caused by phthisis, caused by the inhalation of stone dust from working rock drills. This disease is frequently contracted by Cornish miners in the Transvaal.

RUSSIAN IRON ORES.

DEPOSITS AND PRODUCTION SUFFICIENT TO WARRANT EXPORTATION.

Consul John H. Grout, of Odessa, gives the following account of the successful development of the iron mines in southern Russia:

Among the various valuable minerals of South Russia are found rock salt, coal, coprolites, kaolin, sands for glass making and other purposes, manganese and iron ores, the latter easily taking the

first place in point of importance. A small village where part of a cavalry regiment was stationed, Krivoi Rog, "Crooked Horn," was but little known outside of a small radius until about a quarter of a century ago, when the outcropping of vast layers of iron ore in its neighborhood began to attract attention. At first an article of secondary importance, limonite ocher, a ferruginous clay, appeared in the market, but very soon the substrata of quartzite embodying unusually rich layers of iron ore became known. Up to that period South Russia had been forced to import vast quantities of iron. Under these conditions the Krivoi Rog ores were taken up with great avidity by metallurgists of the region and the development of this mining industry was rapid. Soon there was more iron ore mined at the Krivoi Rog than could readily be taken up by the metallurgists of the district and attempts were made to export it. These attempts coincided, first with a period of great demand for ores in the world's markets and later on with a keenly felt depression. As a result of these conditions exports at first were made at a rapid rate, thereafter suffering reaction.

THE INDUSTRY LANGUISHING.

At present this industry is in a languishing condition, due in a measure to an attempt to make some other disposition of the surplus ore. More than once it has been suggested that the Government would be wise to forbid exportation of these products in order to retain within the country these valuable ores, upon the supposition that there is but a limited quantity, which has been estimated at 18,000,000 to 90,000,000 short tons. No particular measures have been taken to ascertain the reserve quantities or exact configuration, geologically, regarding which considerable difference of opinion exists.

There are 73 mines, belonging to 33 separate companies or private persons. Of these, 48 mines are in operation and 25 idle. These 33 owners possess among them 9,581 acres of land and they rent 20,501 acres. The payment of rents nearly always takes the shape of royalties and is very low, the average amount paid being about 14 cents per ton extracted, but in some cases six times as much. The area actually occupied by the mines is about 314 acres, which is worked from above ground and 58 acres mined underground. The work is now carried on from 35 to 350 feet below the surface. The thickness of the ore-bearing stratum varies from 7 to 400 feet, while the cut-away clinal ends are covered with 3 to 150 feet alluvium. The quantity mined in 1906 was 3,670,000 short tons.

WAGES AND SANITARY CONDITIONS.

Manual labor, horse, steam, and electric power are employed. The average production per annum per man has amounted to 388 short tons, or 588 short tons if actual miners alone are taken into consideration. The rate of remuneration for the miners and unskilled laborers varies from \$118 to \$206 per year. The men, many of whom have come from long distances seeking this work, are comfortably housed and fed at the expense of the mine. Sanitation is well looked after. Hot baths are provided and ambulances and small hospitals are provided for the sick. For these reasons the men live at the Krivoi Rog under far more favorable circumstances than in their native homes. The neighborhood enjoys a good reputation for salubrity. Neither fever nor any other diseases are endemic, and the use of the local waters

for drinking purposes is not injurious, although much of it is overcharged with iron.

The absence of phosphorus and the extremely insignificant quantity of sulphur present in the ores make them particularly valuable. Not very long ago it was conjectured, from the schistose nature of the dead rocks underlying the layer of iron ore, that deeper down valuable slate quarries would be found.

INJURING FOREIGN TRADE.

MANUFACTURERS SHOULD HEED COMPLAINTS AND RECTIFY MISTAKES.

Of a Shanghai manufacturer finding fault with hydraulic cotton oil pressing machines purchased in the United States, and failing to receive any reply to his complaints from the manufacturers, Deputy Consul-General W. Roderick Dorsey, of that city, writes as follows:

The matter was brought to the attention of the manufacturers but, up to June 12, without satisfaction to the purchasers. For this reason, and this alone, American machines were superseded by those of British make. The company who shipped the machines doubtless did so in good faith, but it behooves the manufacturer who is sending his products to remote countries to subject them to the most thorough test and inspection before shipment.

The incident referred to is in itself small, but such occurrences harm American interests generally. When complaints are brought to the attention of manufacturers they should not be treated lightly, but should be investigated and satisfaction accorded to the buyer whenever the circumstances demand it. Competition in China is keen, and anything that tends to discredit American wares is a gain to competitors. If we are to strengthen our position in China commercially, or even maintain our present position, the producers at home must disabuse their minds of the idea that anything is good enough for China, and put goods in this market of such quality and under such representations that will render practically impossible an occurrence such as this under consideration.

[In transmitting the foregoing report Consul-General Charles Denby confirms Mr. Dorsey's statement as to the importance to American trade development in China of scrupulous care in maintaining the quality of American goods.—B. of M.]

Sardines from Norway.

The exports of sardines from Norway to the United States for the past three years are furnished by Special Agent A. G. Perkins. The figures were obtained from the records of the American consul-general in Christiania, and include only the declared exports of sardines, though there were several thousand dollars' worth of canned fish, some of which may have been sardines.

From—	1905.	1906.	1907.
Bergen	\$5,861.91	\$81,878.83	\$239,629.07
Stavanger	230,812.75	376,664.60	557,774.96
Total	241,674.66	458,543.43	797,404.03

FOREIGN TRADE OPPORTUNITIES.

[Inquiries in which addresses are omitted are on file at Bureau of Manufactures. In applying for addresses refer to file number.]

Consuls are requested to contribute to this department.

- No. 2501. Panama Canal supplies.**—Bids will be received until August 12, 1908, by the Isthmian Canal Commission, Washington, D. C., for the supply of cross-ties, lumber, steel, flat cars, push and hand cars, track gages and levels, jacks, repair parts for dump cars and dredges, nut-lock washers, bolts, bits, breast drills, rock drills, hose, hose menders, hose clamps, taps, stocks and dies, copper ferrules, drawer locks, carborundum wheels, wire, electrical material, dry batteries, blast torches, lamp shades, friction tape, marine clocks, fire brick, cotton waste, lubricating grease, tallow, plaster of paris, sapolio, kitchen utensils, dishes, slop buckets, washtubs, ice-cream freezers, oilcloth, toweling, leatheret chair bottoms, etc. [Circular No. 459.]
- No. 2502. Windmills, pumps, hardware, etc.**—An American consul in a city of eastern Europe reports that there is a market in his district for hardware, windmills, pumps, aermotors, etc., and forwards the name of a firm that desires to communicate with American manufacturers of the foregoing goods with a view to securing the agency for the same in that region.
- No. 2503. American goods of various kinds.**—A report has been received from an American consul in a European country stating that a local business man has requested the consulate to put him in touch with American firms who desire to secure a market for their goods. He desires to act as agent for any line of goods for which a market could be developed.
- No. 2504. Steamboats for shallow water.**—An American consul in a Latin-American country reports that a sugar company of which a local business man is the head has recently ordered a steamer from England, to draw 2 feet of water, for the purpose of navigating a river in that region where their factories are located. The consul states that it is reported that the company will probably place other boats on this route in the near future. American firms desiring to keep in touch with the head of the company with a view to supplying future requirements in this line can obtain his name from the Bureau of Manufactures.
- No. 2505. Machine tools.**—A report has been received from an American consul in a European city in which he states that there appears to be a market in his district for American machine tools of various kinds. He also forwards with the report the names of two local reputable business houses that would be willing to take the agency of American manufacturers of the foregoing class of goods desiring to exploit that region.
- No. 2506. American canned fruits.**—An American consular officer in Germany reports that a request has been received at his office from a local merchant who desires to enter into correspondence with American exporters of canned fruits, preferably California fruits, as he wishes to import the same direct.
- No. 2507. Water or beer pumps.**—The managing director of a British firm of engineers and coppersmiths has requested an American consul to furnish him the names of American manufacturers of water or beer pumps, as the firm desires to purchase some of these pumps.
- No. 2508. Corsets.**—An American consular officer in Germany has been advised by a local firm that it is looking for a responsible American business house engaged in the manufacture of corsets, which would be willing to give it the agency for its goods in that region.
- No. 2509. Dock works.**—Tenders will be received until October 15, 1908, by the Italian Ministry of Marine, Rome, Italy, for the construction of a new dry dock and for various alterations and extensions to the Government Dockyard at Venice. Copy of the programme and plans may be obtained by addressing the Ministry at the above address.
- No. 5210. Plant for beer, mineral water, etc.**—The Diario Oficial of Brazil has published a copy of a decree authorizing the Companhia Industrial Germanica to carry on work in the Republic of Brazil. The company has been formed for the production of beer, liquors, vinegar, mineral waters, biscuits, soap, etc., and to acquire or establish factories for that purpose.

AUSTRALIAN OVERSEA TRADE.

AN INCREASE IN IMPORTS OF MERCHANDISE—A DECREASE IN EXPORTS.

Consul-General John P. Bray, of Melbourne, supplies the following Australian foreign commerce statistics for the early portion of this year:

During the first three months of 1908 the oversea exports of merchandise from Australia, as compared with the corresponding period of 1907, amounted to \$63,725,275, a decrease of \$26,293,174, while the imports have increased by \$5,225,794, reaching \$62,255,125. The exports of gold amounted to \$16,125,420, an increase of \$4,916,781, and the imports decreased by \$495,716, to \$1,822,402.

The following is a list of the principal imports and exports for the three months:

Imports:		Imports—Continued.	
Apparel and dry goods	\$18,590,906	Machinery, agricultural	\$408,944
Boots and shoes	469,325	Machinery, other	3,121,728
Cement	32,040	Manufactures of metals	4,392,493
Cordage	799,785	Manures	536,673
Chemicals	1,109,869	Oil	562,426
Earthenware	431,114	Paints	583,803
Fish (preserved, etc.)	848,640	Spirits	713,570
Hats, etc.	546,673	Sugar	608,782
Hops	68,209	Tea	1,263,479
Iron, galvanized	1,214,391	Tin plates	375,362
Iron and steel	1,295,467	Tobacco	
Iron (pig)	182,703	Manufactured	105,389
Jute goods	1,079,288	Unmanufactured	200,801
Leather	316,191	Cigars and cigarettes	134,929
Lumber	2,422,067	Wine	146,401

With the exception of currants, hats, galvanized and pig iron, jute goods, agricultural machinery, metal manufactures, oil, and spirits, which show slight decreases, every article in the foregoing list shows a substantial increase.

Exports:		Exports—Continued.	
Butter	\$5,136,975	Ores, other than gold	\$1,305,886
Coal	1,876,483	Pearl shell	196,791
Copper ingots	2,176,085	Silver	1,145,564
Flour	1,174,676	Skins, sheep	1,265,027
Fruit, fresh	553,160	Skins, rabbit	149,086
Hides	221,377	Skins, other	157,967
Horses	113,063	Tallow	755,388
Lead, pig	1,341,446	Tin	1,096,052
Leather	586,778	Wine	117,964
Lumber	1,012,393	Wheat	6,397,561
Meat, frozen	1,198,707	Wool	28,919,624

Wool decreased by nearly \$15,000,000, butter by \$851,949, wheat and flour by \$1,045,289, copper, lead, tin, and silver together by \$3,693,673, and frozen meat by \$1,539,395.

IMPORTS OF BRITISH DRY GOODS.

The aggregate value of the imports of dry goods from the United Kingdom for the three months was \$7,727,636, against \$7,548,311 for the corresponding period of 1907. The following are the figures for the first three months of this year:

Apparel	value..	\$1,077,599	Jute piece goods	yards..	944,800
Boots and shoes	pairs..	238,872	Linen piece goods	do....	2,687,100
Carpets	yards..	227,300	Silk broadstuffs	do....	42,793
Cotton piece goods	do....	34,486,600	Woolens	do....	8,456,800
Haberdashery and millinery ..	value..	\$244,220	Worsted	do....	2,157,700

TRADE OF VICTORIA.

During the first four months of 1908 the imports and exports of the State of Victoria, Australia, both show decreases in comparison with corresponding period of 1907. The imports of merchandise

were \$25,620,580 and of gold \$788,928, and the exports \$16,916,557 for merchandise and \$6,463,588 for gold. The following are the principal imports and exports during the four months:

Imports:		Exports:	
Apparel and dry goods.....	yards.. 1,586,552	Bacon and hams.....	pounds.. 10,390
Beer.....	gallons.. 225,755	Butter.....	do.... 8,677,776
Candles.....	pounds.. 18,196	Biscuits.....	do.... 136,069
Cement.....	hundredweight.. 107,744	Confectionery.....	pounds.. 158,966
Hops.....	pounds.. 123,083	Flour.....	centals.. 427,007
Iron and steel.....	hundredweight.. 263,782	Fruit, fresh.....	do.... 6,689
Iron, galvanized and pig....	do.... 197,946	Hay and chaff.....	hundredweight.. 9,221
Lumber.....	value.. \$921,846	Jams.....	pounds.. 186,721
Machinery, agricultural....	do.... \$186,087	Meats, frozen.....	do.... 9,524,178
Machinery, other.....	do.... \$865,750	Meats, tinned.....	do.... 156,122
Manufactures of metals.....	do.... \$1,549,800	Poultry.....	pairs.. 5,399
Meats, tinned.....	pounds.. 46,082	Rabbits, frozen.....	do.... 297,886
Oil, kerosene.....	gallons.. 1,732,358	Skins, sheep.....	number.. 1,570,764
Spirits.....	do.... 183,885	Skins, rabbit.....	pounds.. 563,195
Tea.....	pounds.. 3,018,349	Raisins.....	do.... 192,526
Tin plates.....	boxes.. 31,083	Tallow.....	hundredweight.. 46,861
Tobacco, manufactured.....	pounds.. 115,561	Wheat.....	centals.. 427,007
Tobacco, unmanufactured,	pounds.. 1,143,806	Wine.....	gallons.. 106,383
		Wool.....	pounds.. 36,401,063

Active Demand for Gloves in Russia.

The Austro-Hungarian consul-general at Moscow reports that the trade in gloves is very active in Russia and that requirements are met almost entirely by articles of foreign manufacture. The kind most in demand is a long glove, made of cotton, half silk, or silk. They are sold by the dozen, at prices ranging from 2½ to 8 marks (mark = 23.8 cents) for cotton up to 20 marks for half silk, and from 20 to 40 marks for the all-silk article. For winter wear woolen gloves are required, and are sold at from 4 to 15 and 20 marks a dozen. All the finer qualities of leather gloves are imported from abroad.

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BRAZILIAN TARIFF SYSTEM.

ORIGIN AND BASIS OF THE PRESENT CUSTOMS LAWS.

Consul-General George E. Anderson, writing from Rio de Janeiro May 23, describes at length the tariff system of Brazil and its workings and effects upon the imports of goods from various countries, and particularly from the United States. The consul-general says:

The tariff system of Brazil of the present day rests upon an act of the Congress of Brazil passed in 1900, but is, as a matter of fact, a system entirely different from the original act as a result of changes made from year to year in the annual budget or appropriation laws passed by the successive Congresses. In the law of 1900 a tariff schedule was established which contemplated the collection of duties as therein set forth on the basis of value for certain goods and of specific duty for other goods. The act was drawn much after the order of the tariff act of the United States then in force, except that the fact that Brazil's currency was at that time fluctuating in value between wide extremes led to a number of changes which were of vast and controlling importance.

In the first place, it was found that since the paper money value of the goods varied so much from day to day there was constant trouble over the amount of the duty collected from different importers for similar goods between short intervals, thus working a hardship to some importers to the benefit of others. For instance, one importer might enter a shipment of flour one day with exchange at 12 pence to the milreis, paying a percentage rate of duty on the same. His rival in business the next day might enter a similar lot having the same value at port of shipment, but by reason of exchange having gone down to 10 pence per milreis his percentage payment of duties would be much greater in paper money, the currency of the country. To avoid such fluctuation and unfairness, exchange was, for customs purposes, fixed at 12 pence to the milreis.

So long as exchange remained in the open money market at or below this rate such arbitrary fixing of exchange meant either no particular change in duties or a lowering of the duties to the extent of the actual lowering of the rate. When exchange rose, more or less permanently, above 12 pence (24 cents), however, the fixing of this rate caused, in effect, an actual increase in the amount of duty charged upon imports. At the present time, for instance, with exchange at 15 pence (30 cents), the valuation of foreign goods on a 12-pence

basis means an increase in the milreis value of 25 per cent, and duties based upon value are therefore by this fixing of exchange increased 25 per cent.

PAYMENT OF DUTIES IN GOLD AND PAPER.

This fluctuation in exchange also led to another very important development in the Brazilian tariff system. Practically all the funded debt of Brazil is upon a gold basis. The charges for interest and sinking funds, where there are any such funds, are fixed charges in gold. So long as exchange was reasonably stationary, the duties based upon gold values, but paid in paper money, had practically a stable volume. When, however, the value of the paper milreis currency of the country decreased in its relation to gold it required more paper money to equal a given sum in gold, and the annual interest charges of the country to be paid abroad were just so much greater in paper money, in which duties were collected, while with the fixing of exchange for customs collections the amount collected from customs did not increase proportionately.

To remedy this evil the Brazilian Government conceived the plan of collecting a portion of the duties in gold, or, to be more accurate, in paper money to an amount which would equal a given portion of the duties in gold according to the exchange of the day. Calculating that the portion of the country's income required for the settlement of its interest charges abroad was 25 per cent, the Government in 1900 established in its budget law the rule that 25 per cent of the duties should be collected in gold exchange, or "vales," on the basis of the par value of the milreis, 27 pence (54.6 cents), and 75 per cent in paper. In 1904 the proportion was raised to 35 per cent and in 1905 the tariff schedule was divided into two classes of goods, upon one of which 35 per cent was payable in gold and upon the other 50 per cent was payable in gold, the balance in each case being in paper. This system is now in force, and in practice it works out an average of almost doubling the import duties as fixed in the tariff schedule.

HOW DUTIES ARE CALCULATED.

Take, for instance, American barbed wire, on which the theoretical tariff rate is 150 reis per kilogram. A thousand reels of wire weigh 26,000 kilograms and at 150 reis per kilo the theoretical duty is Rs. 3:900\$000, to which Rs. 10\$000 must be added for the charge for statistical purposes. Of this Rs. 3:900\$, 35 per cent, or Rs. 1:365\$, is payable in gold and Rs. 2:545\$ in paper. The sum of Rs. 1:365\$ in gold plus 2 per cent of the value in gold, which is the charge on imports for port improvements and docks, amounts in gold at 27d. to Rs. 1:521\$000, and in paper at 15d. this becomes Rs. 2:727\$153. Add this to the amount, Rs. 2:545\$, payable in paper and the total duties actually collected amount to Rs. 5:272\$153. Where the proportion payable in gold is 50 per cent, the same method of calculation is followed, the increase being greater. Where a duty is ad valorem, the value of the goods is first fixed on the basis of 12d. to the milreis, and the duty, including the portion payable in gold exchange, is worked out on that valuation. Take as an example the great class of motors, engines, and the like, on which the theoretical duty is 15 per cent ad valorem. An engine valued at, say, \$2,000 is entered; its value at 15d, the present actual exchange, is substantially (30 cents

to the milreis) Rs. 6:666\$. The value is calculated at the customs exchange of 12d., or about 24 cents to the milreis, and is thus fixed at Rs. 8:333\$ instead of 6:666\$. The duties work out as follows:

15 per cent of an evaluation of Rs. 8:333\$ equals Rs. 1:249\$950.	
35 per cent of the duty payable in gold, or Rs. 437\$482, at \$.546 per milreis, equals -----	\$238. 70
2 per cent ad valorem in gold, or Rs. 166\$660, at \$.546 per milreis, equals -----	91. 00
65 per cent of the duty payable in paper, or Rs. 812\$468, at \$.30 per milreis, equals -----	243. 74
Total duty -----	573. 44

instead of \$300 theoretically due on a valuation of \$2,000, with a 15 per cent duty.

EFFECT ON PRICE QUOTATIONS.

In a large number of items the value is arbitrarily fixed in the tariff schedule and is above the actual value.

In other cases where the value of the goods is based on the invoice price, the latter is converted into Brazilian currency on a basis of 12d. per milreis, which, taken with the proportion payable in gold, leaves little resemblance between the duties actually effective and those theoretically due on the basis of the theoretical rate or "Razão" fixed in the tariff schedule. The complicated nature of the calculations necessary for the determination of the duty to be paid in any case is the chief cause of trouble in the operation of the Brazilian tariff law, and this, with a number of other reasons, has made it almost a necessity, in which Brazilian importers have concurred, for foreigners selling goods to Brazilian customers to base their prices f. o. b. in the foreign port, leaving the matter of freights, and especially of duties, to be settled by the Brazilian importer.

The matter of freights has been complicated from time to time by custom-house stoppages or blockades which have prevented the prompt discharge of goods and which have led shipping companies to increase their rates for Rio de Janeiro. In the summer of 1906-7 the transatlantic companies serving the port increased their rates of freights 20 per cent for this reason.

CHARGES FOR PORT WORKS.

It will be noted that to all customs duties fixed by the tariff schedule and quoted above there has been added 2 per cent of the official value of the goods, valuing the goods on the basis of the 12d. rate, but charging the percentage in milreis at 27d. as a charge for port works. This charge was originally made only in Rio de Janeiro. The law authorizing the loan of some £8,000,000 for the construction of modern docks and approaches in the city, the fund which has been the basis for the immense public improvement enterprises carried on in the city and which will be added to by other loans, authorized the collection of 2 per cent ad valorem in gold on all goods brought into the port and paying duty, the sum thus produced to go to the payment of interest charges and amortization of the sum borrowed for the works.

Since this original authorization similar acts were passed covering port works at Manãos, Para, Bahia, Victoria, and Rio Grande do Sul, and in 1906 the budget law contained a blanket authorization

for the collection of such 2 per cent duty in all of the ports of the Republic as a basis for port improvements in the port in which the sum is collected. While port works have not yet been undertaken in all of the ports, the imposition of the tax is practically universal and American exporters dealing with Brazilian imports may regard the tax as of universal application.

There is also imposed a tax of 10 reis per unit on all goods imported, which tax supports the statistical system of the exportation and importation of the country. While small in itself (about 0.3 of a cent), the tax in the aggregate is estimated this year at Rs. 350,000\$, or \$105,000.

UNITS OF QUALITY IN THE TARIFF SCHEDULE.

In general the tariff schedule of Brazil is based upon units of the metric system, weights are in kilograms (2.2 pounds) or metric tons of 2,200 pounds; measures in liters; lengths in meters. For instance, customs returns for the year will show imports of locomotives or engines of such and such a number of kilos or tons, the number not being given. Duties on kitchen utensils and articles of similar character, cotton goods, most metal goods, indeed most manufactured goods, are levied by weight, often without regard to the quality of the goods. The result is a number of apparent inequalities which admit goods of considerable value at comparatively low rates and do not admit goods of low value except at a high rate. Such inequalities are gradually being worked out of the system by increasing the number of items specified in the tariff schedule and by specifying rates upon several varieties and grades of goods in each class. Wood is imported by cubic meters, wines by the liter, most oils and similar goods by the kilo.

In importing goods packed in cases, bottles, or other means of conveyance the duty is assessed on packages either net or gross as specified in the schedule; in case the kind of weight is not specified it is assumed that the gross weight is to be assessed. It is often of great importance, therefore, that the nature of the packing be such as to weigh no more than the safety of the goods requires.

RATES OF DUTY UNDER THE BRAZILIAN TARIFF.

The outline of the Brazilian tariff thus given, indicating how it has been built up from year to year as needs of the moment required, has shown in a general way that the rates charged are high. How high the rates actually are, however, is not realized in the United States, and this fact has led to many misunderstandings of the business and trade situation in this country as regards American goods. The total imports of Brazil in 1907 amounted to Rs. 644,937:744\$. The total amount of money actually collected as import duties was Rs. 368,387:663\$, to which must be added a sum estimated at Rs. 10,000:000\$, collected for port improvements (Rs. 5,147:107\$ for Rio alone, figures for other ports not yet reported), or a total of Rs. 378,387:663\$. The rate of duties actually collected on an average last year was, therefore, 58.66 per cent.

The minister of finance in his annual report for 1907 shows that goods not on the free list were admitted free of duty for Government account or for similar purposes to the amount of Rs. 164,202:601\$, official value. Goods admitted free of duty as on the free list (coal,

coke, and fuel almost altogether) amounted to substantially Rs. 35,000:000\$. Accordingly, out of a total of Rs. 644,937:744\$ imported, substantially Rs. 199,202:601\$ was imported free of duty either for private account as on the free list, or for governmental or other purpose having duty exemption. The amount of duty collected, therefore, was actually collected on imports to the value of Rs. 445,735:143\$, instead of on the total imports, and the average per cent actually charged on goods on which duty was paid was 84.89.

This rate does not, however, represent the actual rate of duty upon goods of common consumption, the amount of goods for special industries imported at a theoretical rate of 15 per cent, or an actual rate of about 25 per cent, being large enough to raise the rates actually felt by general importers to at least 95 per cent. Most of the imported goods of common use are taxed with a consumption tax after passing the customs, as for example, bottled goods, preserved food products, shoes, millinery, and similar lines, a stamp tax being collected on the same regardless of their origin, before they can be sold in the country.

On some goods of common consumption the tariff duties run exceptionally high, and are high on all such items. According to a statement prepared by the Commercial Association of Rio de Janeiro, the importations of printed calicoes in the port of Rio from January to March, 1906, the last year for which figures in detail can be had as yet, were valued at Rs. 45,216\$ f. o. b. in Rio de Janeiro, the duties collected on them being Rs. 67:701\$, or about 150 per cent. The importations of shirtings during the same period amounted to Rs. 29:892\$ f. o. b. Rio harbor, and the duties collected were 33:742\$, or 118 per cent. The importations of cassimeres in the same period were valued f. o. b. here at Rs. 16:620\$, and the duties collected were Rs. 23:730\$, or 143 per cent. Such goods are now imported at substantially the same rates of duty. The duty on American hams, on an f. o. b. New York value of 12 cents per pound, on the basis of a theoretical rate of 1\$200 a kilo amounts to 48.2 cents a kilo—22.9 cents per pound, or 191 per cent. The duty on American prunes, valued at 7 cents per pound, at the theoretical rate of 400 reis per kilo, amounts to 7.3 cents per pound, or 104 per cent. Such rates are typical of duties paid on goods of common consumption.

EFFECT ON CLASSES OF IMPORTS.

With import duties in Brazil as high as they are, there are several trade matters of importance to American exporters to consider. It is evident that with such high duties it pays to give particular attention to what can and what can not be imported to advantage under the customs law. In a report on cotton goods in Brazil from this consulate-general, published something over a year ago, it was shown that the cotton schedule specifications of the tariff act were so drawn as to make the duties exceptionally high upon standard grades of goods, and that the successful importers of cottons were those who studied the tariff act and had goods made to meet specifications which would come in under a lower rate in the schedule.

The same principle runs through most of Brazil's imports. It is difficult, for instance, to secure cloth for men's clothing of medium grade in Brazilian markets, because duties are so high on all but the cheapest grades that it does not pay to import any medium-grade

mixtures. The duty on collars and cuffs is a specific duty. It is high and it is the same on all grades of goods. The result is that no cheap collars and cuffs are imported—only the best grades come from abroad, and most Brazilian furnishing goods establishments sell a better grade of collars and cuffs than stores in the United States. The same is true of silk and cotton mixtures. Silks bought in Brazil are either very poor in quality or they are very good. None but the best champagnes are imported. The rule holds good in cutlery, in shoes, in nearly all lines of imported fabrics, clothing, foods, and most goods of common consumption.

HEAVY INSPECTION CHARGES.

In addition to the high import duties charged upon the average on Brazilian imports there are a number of special charges which amount to additional duties and which have even more force in hindering importations than import duties themselves. Among these are the charges for the analysis and inspection of some classes of merchandise, notably food, medicinal, and beverage products. The laws of Brazil governing the sale of food products are very strict as to purity, contents, marks, brands, and similar requirements. Few preservatives are tolerated in even the slightest degree. All foods, beverages, medicinal preparations, and articles intended for human consumption in any form must be examined, analyzed, and approved by Government authorities before being admitted.

This is interpreted to mean that each consignment of any food product must be examined, and often the examination extends to each package. Each consignment of flour, for instance, though it may be of a well-known brand, must be passed upon by the Government laboratory authorities, for which a fee of Rs. 20\$, or about \$6, ordinarily is charged. In some lines of goods each separate case is examined. In the line of fruit preserves and conserves, as well as in other valuable food products, the loss due to actual goods taken for analysis amounts to a very considerable item in the cost of importation.

In the case of custom-house blockades, which have been of rather common occurrence in Brazilian ports in the past two years, delay for the examination and analysis of goods has resulted in the goods spoiling, in which event, of course, they could not be passed, and were a total loss. The matter of the inspection of food products has been of particular importance to the United States, because of the large proportion of American exports to Brazil consisting of such goods.

THE DISPATCHING OF GOODS.

Another material change which acts as an increase of import duties arises from the clearance of goods through the custom-houses. To be passed through a custom-house in Brazil goods must pass through the hands of a "despachante." The "despachante" is something more than a custom-house broker such as are known in the United States and elsewhere. In Brazil the owner or importer of goods can not go to the custom-house and get them.

Under the law the goods can only be delivered to a "despachante" on the order of the owner or importer. The "despachante" gives a bond to the Brazilian Government for the faithful performance of

his duties. The owner or importer signs an order for the goods on an official blank, which is stamped with Government tax stamps. Then the dispatcher looks after the proper custom-house entry, pays the duty with money furnished by the importer for that purpose, and looks after the transportation of the goods from the custom-house to the place desired by the importer.

Aside from transportation charges, upon which he generally makes a large profit, the dispatcher charges a fee for his services. The charge runs all the way from a milreis (30 cents) to 25 milreis (\$7.50) per package, or even more if he deems the service is worth more. This matter of dispatching, therefore, is often a serious addition to the cost of imports.

Failure to properly clear goods through and remove them from a custom-house leads to the imposition of storage charges in geometrical ratio, so that the value of goods is often eaten up in a comparatively short time. Goods not cleared or held for storage charges are auctioned to the public at stated intervals.

FINES AND PENALTIES.

One of the features of the Brazilian tariff system which has caused considerable trouble to American exporters is the system of fines and penalties which is attached not only to actual and intentional infractions of the law, but which arise even in cases where there is actual and proper differences of opinion. For instance, in entering goods for importation in Brazil it is necessary to enter them in the right class or be fined for making the mistake. In case the importer is not satisfied with the ruling he can appeal to a board composed of customs officials and thence to the ministry of finance. If he wins, he is free from a fine or a penalty and gains his point. If he loses, he is fined, whether there was reasonable ground for his contention or not. It should be added that under the law half of the fine goes to the informer or the customs officer discovering the error.

INVOICES.

All goods imported into Brazil, except samples worth less than Rs. 100\$ or \$30, and weighing less than 10 kilos or 22 pounds, and also limited as to size, or coming by parcels post, must be invoiced before a Brazilian consular officer in the United States in practically the same manner as is required by the United States.

Failure to properly invoice such goods and to present the invoice at the time of entering the goods for importation leads to the giving of a bond for the production of a proper invoice within a specified period, generally three months, and failure to produce the invoice at that time leads to a fine. Failure to produce the invoice in the first instance not only leads to the trouble and expense of giving bond, but practically operates to prevent the clearance of the goods without great difficulty. It should be noted also that the tariff laws are strictly enforced with regard to goods of tourists and immigrants.

RELATIONS WITH THE UNITED STATES.

The United States, by reason of its admission free of duty and purchase of so great a portion of Brazil's exports of coffee and rubber, having taken about half of the total exports of all kinds from Brazil in the past ten years, enjoys a preferential reduction of 20 per

cent of the duty upon the following American goods imported into Brazil: Wheat flour; condensed milk; inks, except writing inks; paints and varnishes; pianos; windmills; refrigerators; typewriters, linotypes, and cash registers; manufactures of rubber; watches and clocks, and scales. This preferential reduction or concession is decreed from year to year by the President of Brazil, under authority from the Brazilian Congress. No preferential is given to any other nation.

Taking the Brazilian tariff system as a whole, it has been of chief interest to the United States in relation to the heavy duties upon articles of common consumption like food products which have been produced in and exported from the United States, but which exports have, by reason of such duties, decreased in volume. However, with the rise of the iron and steel industry and the increasing volume of its products—machinery, electric apparatus, railway supplies, and the like—the interests of the United States are at present probably not more heavily borne upon than those of its trade competitors. Brazil's tariff system is important to the United States at the present time, chiefly for the fact that its rates are so high as to restrict and reduce consumption to a minimum, even in many lines of goods where Brazilian industries have not produced substitutes.

OTHER EXPORTERS TAKING ADVANTAGE OF CONDITIONS.

The need of special care and attention to the Brazilian tariff schedule should be appreciated by every American exporter. While, on the face of things, the schedule bears heavily upon all countries, as a matter of fact the trade of the United States is suffering at the present time from the operation of the tariff to a greater extent than that of its trade rivals. In the trade in cotton goods, for example, it is the habit of American exporters to quote prices on and to export goods when possible of certain standard grades, qualities, and technical description. It does not seem to have occurred to them that such goods are precisely the ones the Brazilian tariff schedule was drawn to keep out, while goods varying somewhat from the technical description of such standard goods, but answering the same general purposes, would be admitted at more favorable rates. Exporters of other countries, with agents on the ground in Brazil, are taking advantage of every such possibility to the disadvantage of American trade. In some lines of food products, like English black beers, similar conditions prevail and the loss of possible trade is material.

Present indications are that the proposed revision of the Brazilian tariff, expected during the past two years, will not be realized.

New Chromatic Ironworks in Russia.

Vice-Consul Harry Suslow sends from Moscow the statement that the Magnesite Company, owners of the ironworks on the Ural, have decided to build a new factory, with an electric furnace, for melting chromium out of chromatic iron. The location will be on the river Satka, 30 versts (20 miles) from their present works. The power for it will be supplied by utilization of the natural forces of the river, which is full of waterfalls in that locality. It is said that the grounds for the works are already rented, as well as the surface for working the chromatic iron.

NEW GERMAN INVENTIONS.

CHEMISTS HAVE WORKED OUT MANY INDUSTRIAL IMPROVEMENTS.

Consular Agent John B. Brewer, at Wiesbaden, describes the further activity of a German firm of chemists, which he says has accomplished a new invention for the welding of steel pipes of large dimensions; a new briquetting method for small-grained iron ores; a new power gas from bituminous coal, and the distribution of heat throughout cities.

A German company, which originated a new hydrogen process especially adapted for military aeronautics, has discovered a series of other processes related to their new water-gas system that are likely to play an important part in great American industries. Their efforts were especially fruitful in the iron and steel industries.

Above all, it is claimed that they have succeeded in welding steel pipes of large dimensions, such as neither the Mannesmann nor any other existing works can produce by their methods; at least not at the same rate of economy and quality.

The welding is done at high speed, while labor and other costs are reduced to a minimum. The textile strength in the weld as compared with the strength of the plate is 90 to 95 per cent, which is rather remarkable.

It is stated that the Japanese navy has adopted the new German system for the welding of their military masts on war ships, etc., and that, after the same system, a British welding company has been formed this spring at Glasgow.

Astonishing results have also been obtained by the firm in question in a peculiar iron-briquetting method especially adapted for the conversion of fine grained, dustlike iron ores like those of the Mesaba range. As is known, these ores can now be worked in the blast furnaces only by a very inconvenient, wasteful, and therefore expensive system. By the new German hydrogen gas process, however, they are converted into extremely hard and porous lumps, in which the contents of pure iron are not, as with the other briquetting methods, diminished and deteriorated by admixtures, but rather increased and chemically improved.

The chemists are also the inventors of an apparatus for making an absolutely tar-free producer gas, or, more correctly, a power gas from bituminous coal. Thereby they have solved another important technical problem in supplying a new fuel and thereby giving a new and many-sided use to the gas motor, especially in those large industries where heretofore it had been operated almost exclusively by the blast-furnace gases, anthracite proving too expensive.

It is understood that still another feature of their industrial programme is the general economical distribution of heat throughout whole cities and districts from one central point.

AMBASSADOR T. J. O'BRIEN forwards from Tokyo a translation by Student-Interpreter A. A. Williamson of a recent order issued by the Japanese Government authorizing the Minister of Agriculture to encourage the holding of competitive cattle shows and to give money prizes to winning exhibitors. The official announcement may be seen at the Bureau of Manufactures.

ARGENTINA FOREIGN COMMERCE.

CONTINUED LARGE INCREASES IN BOTH IMPORTS AND EXPORTS.

From official statistics, Consul-General Alban G. Snyder, of Buenos Aires, presents the following exhibit of the Argentine foreign commerce for the first three months of the present year, the figures being on the Argentine gold basis, \$1 of which equals \$0.965 American currency:

	Imports.	Exports.
First quarter, 1908.....	\$70,840,220	\$115,627,832
First quarter, 1907.....	54,660,885	96,946,615
Increase	16,179,335	18,681,217

Of the imports \$48,471,353 were subject to duty, and \$13,147,470 of the increase was of merchandise subject to duty. Gold imported amounted to \$14,268,679, while only \$22,136 was exported. The proportion of trade of the principal Argentine ports was as follows:

Port.	Imports.	Exports.
	Per cent.	Per cent.
Buenos Aires.....	80.3	83
Rosario.....	11.3	24
Bahia Blanca.....	3.1	17.4
La Plata.....	1.7	6.1

The extent of Argentine commerce with the principal countries during the first quarter was as follows:

Country.	Imports.	Exports.
United States.....	\$8,163,291	\$2,333,398
United Kingdom.....	25,370,091	23,718,885
Germany.....	11,598,787	9,580,562
Belgium.....	3,134,884	10,010,306
France.....	6,517,813	9,091,019
Italy.....	6,452,543	1,973,398
Holland.....	595,776	2,062,529

The increase in the importations from the principal countries compared with the same period of last year was as follows: United States, \$186,690; United Kingdom, \$5,873,021; Germany, \$3,393,224; Italy, \$2,747,934; France, \$1,147,242, and Belgium, \$415,213. The classified imports for the three months, their value, and a comparison showing increase or decrease over a like period of 1907, were as follows:

Classes.	1908.	Decrease (—) or increase (+).
Live animals.....	\$375,548	— \$131,878
Animal foodstuffs.....	1,008,202	+ 821,524
Vegetable foodstuffs and fruits.....	348,213	+ 171,263
Spices, sugar, etc.....	2,287,719	+ 1,175,116
Vegetables and cereals.....	934,261	+ 447,430
Coffees, teas, etc.....	1,811,830	+ 418,569
Flour, pastes, etc.....	129,859	+ 41,251
Cigars, tobacco, etc.....	1,596,007	+ 686,040
Wines and liquors.....	2,962,048	+ 877,686
Textiles.....	14,150,466	+ 3,324,082
Oils and minerals.....	2,395,078	+ 1,043,906
Chemical and pharmaceutical products.....	2,389,571	+ 705,828

Classes.	1908.	Decrease (-) or increase (+).
Colors and inks.....	\$399,899	+ \$143,469
Lumber.....	519,895	+ 137,110
Furniture, etc.....	956,364	+ 319,874
Paper and cardboard.....	820,258	+ 247,347
Articles made of paper and stationery.....	799,494	+ 332,793
Leather, raw and manufactured.....	521,322	+ 144,586
Iron, steel, wire, nails, etc.....	3,949,294	+ 1,196,679
Manufactures of iron and steel.....	3,462,414	+ 491,345
Other metals.....	733,523	+ 425,187
Manufactures thereof.....	1,254,839	+ 232,984
Agricultural implements, etc.....	2,874,383	- 139,388
Locomotion (vehicles of all kinds).....	8,667,061	- 1,042,694
Glassware, crockery, etc.....	6,951,877	+ 2,543,924
Building materials.....	5,815,659	+ 1,217,940
Electrical goods.....	948,797	+ 275,036
Miscellaneous.....	1,782,839	+ 571,801
Total.....	70,840,220	+16,178,335

Details of various leading imported articles for the same period follow:

Articles.	Value.	Decrease— or increase +
FOODSTUFFS.		
Sugar.....	\$1,971,056	+\$1,065,932
Rice.....	559,696	+ 287,161
Coffee.....	219,780	+ 39,941
Tea.....	474,741	+ 278,419
Yerba mate.....	970,399	+ 83,157
Cigars.....	301,301	+ 154,719
Tobacco.....	523,584	+ 199,154
Wines.....	2,246,579	+ 681,741
Alcoholic drinks.....	568,657	+ 185,293
Nonalcoholic drinks.....	146,812	+ 10,652
TEXTILES.		
Silk goods.....	895,976	+ 139,578
Woolen goods.....	4,026,470	+ 1,287,805
Cotton goods.....	7,543,192	+ 1,581,868
Other textiles.....	1,684,826	+ 355,813
VARIOUS MANUFACTURES.		
Oils and other minerals.....	2,395,078	+ 1,043,906
Chemical products.....	2,339,571	+ 705,232
Paints, ink, etc.....	399,899	+ 143,469
Paper and cardboard.....	820,258	+ 247,347
Pianos.....	130,400	+ 35,005
Lumber, posts, etc.....	519,895	+ 76,722
Leather goods.....	521,322	+ 144,586
Books and prints.....	799,000	+ 332,793
Agricultural implements.....	2,874,383	- 139,388
Iron and steel goods.....	3,462,414	+ 491,345
Wire, steel, and iron.....	3,949,294	+ 1,196,679
Other metals.....	733,523	+ 425,187
Goods of other metals.....	1,254,839	+ 232,984
Building material.....	5,815,659	+ 1,217,940
Electrical goods.....	948,797	+ 275,036
Coal and coke.....	5,678,325	+ 1,946,195
LOCOMOTION, ETC.		
Bicycles.....	29,640	+ 13,556
Coaches and carts.....	117,036	+ 84,639
Automobiles.....	166,751	+ 67,248
Street cars.....	133,623	- 66,939
Steel rails.....	1,537,512	+ 286,133
Railway cars.....	1,313,024	+ 49,867
Railway material.....	1,406,362	+ 924,416
Street-railway material.....	135,547	+ 61,022
Locomotives.....	1,274,064	- 539,250
Launches and tugs.....	59,903	- 112,125

The bicycles imported in the first three months of 1908 numbered 844, the automobiles 151, the street cars 50, the railway cars 638, the locomotives 71, and the launches and tugs 44.

BANKING IN BRAZIL.

A FIELD WAITING FOR AMERICAN CAPITAL.

Consul-General George E. Anderson, writing from Rio de Janeiro, again calls attention to the importance of establishing United States banking facilities in South America.

The subject of establishing an American bank in Brazil, which has been previously reported upon by this consulate-general, has been considered by a number of interests in the United States, though nothing definite has resulted. The financial center of Brazil is Rio de Janeiro, and such an institution would naturally have its center here. The fact that practically all other foreign banks here also have establishments in Buenos Aires, Montevideo, and some other South American cities indicates that such an institution should be established upon a broad foundation, and that successful plans for it would include most of the South American continent. It would be of assistance to American trade if a bank were established to cover business in Brazil and Argentina, and the undertaking would be profitable.

There are five so-called foreign banks doing business in Rio de Janeiro. They are the London and River Plate Bank, with a subscribed capital of £2,000,000 (£1=\$4.86), a paid-up capital of £1,200,000, and a reserve fund of £1,200,000; the London and Brazilian Bank, with a capital of £2,000,000, a paid-up capital of £1,000,000, and a reserve of £910,000; the British Bank of South America, with a capital of £1,300,000, a paid-up capital of £650,000, and a reserve fund of £535,000; the Brasilianische Bank für Deutschland, with a realized capital of 10,000,000 marks (mark=23.8 cents), and the Banco Commerciale Italo-Brasiliano, with a paid-up capital of 5,000,000 milreis (\$1,500,000), and a reserve of 1,000,000 milreis (\$300,000), the last named being organized in Brazil, but owned largely in Italy.

STATEMENT OF RIO DE JANEIRO BANKS.

The general situation of the banking business here is best indicated by the following statement of the position of the three largest banks at the end of February, this year (milreis=30 cents) :

	London and Brazilian Bank.	London and River Plate Bank.	Brazilian Bank für Deutsch.
ASSETS.			
Capital uncalled	Milreis. 8,888,889	Milreis. 2,791,305	Milreis. 21,735,798
Bills discounted	8,126,709	6,197,454	16,060,557
Loans and guaranteed accounts	13,179,656	23,372,664	26,677,772
Bills receivable	34,506,012	17,070,125	22,942,977
Bills and securities pledged	23,884,392	45,108,544	23,440,065
Securities in depositories	29,987,938	18,570,590	16,058,094
Accounts head offices and branches	23,347,044	9,865,853	10,735,093
Cash	8,567,864	2,715,947	
Sundry			
Total	145,478,494	125,892,522	137,640,346
LIABILITIES.			
Capital	17,777,777	3,500,000	10,000,000
Reserve fund			
Deposits at sight	30,566,723	13,494,135	20,014,924
Deposits at fixed dates	13,653,540	10,321,831	15,938,949
Securities pledged and belonging to customers	23,884,392	62,179,709	73,060,905
Head offices and branches	14,686,234	9,708,717	14,928,458
Sundry	44,909,828	26,488,130	3,697,110
Total	145,478,494	125,692,522	137,640,346

Compared with a similar statement two years ago this shows a large increase in loans and discounts and less dependence upon exchange for profits. Two years ago the vast mass of the profits of all the foreign banks in Brazil was from exchange. In the past few months there has been a remarkable change in the course of the banking business here due somewhat to the course of the Brazilian Government in ordering that all exchange transactions growing out of customs duties shall be made through the Bank of the Republic, the Government banking institution. At the annual meetings of the corporations this change was spoken of as occasion for congratulation. These banks have been paying 16, 18, and 20 per cent per annum dividends on their capital, and will average about 9 per cent on the capital and surplus during the past ten years or more. Substantial buildings have been purchased or built, and their business is well established and the most prosperous in the countries they cover.

FEW RESTRICTIONS ON FOREIGN BANKS.

While the business of banking in Brazil is more or less regulated in its relation to Brazilian finance—such, for instance, as the rule concerning the purchase of foreign exchange for the payment of duties in gold—there is no general supervision of foreign banks by the Brazilian Government. While there is some talk of legislation along such lines present indications are that nothing will be done. The banks do business and maintain their credit upon their financial showings and without other guaranty than their own credit. They issue no paper money or similar obligations.

From the standpoint of a loan and discount business a bank founded by American capital and familiar with American banking methods ought to have a first-class opportunity for establishing itself here. American business here is rapidly increasing, the percentage of increase of American-origin imports in Brazil last year was higher than that of any other great trading nation, and the need of American banking facilities is constantly felt.

Discounts of paper based upon American goods—American consignments—are constantly offered, and these would largely go to an American bank, other things being equal. The fact that a material portion of the loan of the State of São Paulo for its coffee valorization scheme was placed in the United States by a New York bank, which received its allotment from a European bank, suggests other lines of banking operations which have been found very profitable.

SAVING IN EXCHANGE.

In the way of exchange it should be noted that imports from the United States amount to about \$25,000,000 annually, and exports to the United States to about \$85,000,000. The balance is paid by way of Europe. On exchange between the United States and Brazil at present bankers charge a profit between Europe and Brazil and then between Europe and the United States, or a double profit. American bankers here would therefore be upon exactly the same level with the European banks here as regards exchange.

They might settle by way of Europe, and to the extent of the \$25,000,000 of imports they would have a direct advantage, off-setting the tendency of money to flow from the United States here in payment for coffee and rubber by that amount, while with Europe, by reason of large loans placed abroad and heavy interest charges, the

tendency of money is to flow from Brazil to Europe in spite of the excess of exports over imports. An American bank here would have all the advantages held by European banks besides other advantages not possessed by them. The establishing of such a bank here would certainly work to the advantage of American export trade.

CHILEAN RAILWAY PROGRESS.

BUILDING OF LONGITUDINAL LINE, AND LARGER FISCAL BUDGET.

Consul Alfred A. Winslow makes the following report from Valparaiso on the construction of railways in Chile:

Work is progressing slowly on the 126 kilometers or 78.12 miles of railway connecting Osorno with Puerto Montt. It is to cost 11,086,460 pesos, or \$4,046,558 United States gold, of which \$713,325 is to be expended for bridges, of which a large proportion is to be steel construction. The contract calls for the completion of the road by June 1, 1912. Here ought to be an opening for rails and bridge materials. The work is being done for the Chilean Government, and the line when completed will form a part of the general north and south railway system, known in Chile as the Longitudinal, and in general as a part of the Pan-American Railway.

The Chilean Government estimates for 1909, now under consideration by Congress, call for an expenditure of \$57,238,015 United States gold, against appropriations amounting to \$54,829,264 for 1908. Of this, about \$10,000,000 is to be devoted to the construction of new railroads and providing new rolling stock.

Austrian Retirement of the Florin.

The Mexican consul at Trieste reported to his Government at Mexico City as follows in regard to the change being effected in Austrian currency:

Beginning in February the Austro-Hungarian Bank, as well as the Exchequer, suspended the payment of silver florins. It is in this way proposed to withdraw silver florins from circulation, covering the withdrawal by the issuance of silver pieces of 1 to 5 crowns. Up to the end of 1907 the Austro-Hungarian Bank had on deposit 248,600,000 crowns in silver florins. This deposit will be diminished by 64,000,000 in order to coin an equivalent amount of 5-crown pieces. The balance of silver florins will remain on deposit in the vaults of the bank until in a few years there may arise a necessity for the coining of other 5-crown pieces.

The object of withdrawing the silver florins from circulation is to accustom the public to the use of crowns as a standard of reckoning. Although the crown has been the obligatory unit of value since 1900, small traders still use the old unit, viz, florins, in keeping their accounts.

Exports of Chinese Tea.

Consul J. C. McNally, of Nanking, reports that the tea trade of China was more flourishing and the shipments greater in 1907 than in any year since 1903, the exports being 214,629,663 pounds, valued at \$25,388,808, an increase of 27,459,400 pounds and of \$4,085,104 over 1906. The shipments to Russia and Great Britain were greater than in 1906, while the United States took 26,891,942 pounds, or 6,626,476 pounds more than in 1906.

ASIATIC COMMERCIAL NOTES.

Vice-Consul Ernest Vollmer, of Tsingtau, sends the following items of interest relating to the industrial and commercial conditions in the Orient:

Requests are said to have been made of the Chinese Government to open Urga, Mongolia, to foreign trade.

The German treasury department has agreed to the demand to allow the coinage of silver in the German colony of Kiaochow, China. It is proposed to start by minting 10 and 5 cent pieces.

At a recent directors' meeting of the Shantung Railway Company in Berlin a dividend of 4½ per cent was declared for 1907. The past year has seen a large increase in the traffic on this German line.

As a result of a severe drought in Shantung province the wheat crop was so seriously affected that the output of first-class straw braid will be greatly reduced.

The Chinese are great smokers, but their native tobacco is comparatively high in price, the best Shantung variety costing \$6 per 100 pounds, while lower grades may be had for \$4.50 to \$4.

Japanese papers report that the German, Chinese, and Japanese shipping companies have joined to cut rates 10 per cent on Chinese inland waters. British and French companies are expected to join the agreement.

The Russian Volunteer Fleet has asked for a subsidy for eleven years on a proposed line from Vladivostok to Kamchatka and a better service from Vladivostok to Shanghai. It is stated that if the demand is granted six new steamers will be started on the runs.

The importance of Vladivostok as a market for Chinese beef is growing. In 1907 an American firm made heavy shipments from the port of Tsingtau, and this year the trade is steadily advancing. A Russian veterinary has been sent to China, and all cattle passed by him will be given entry at Vladivostok without further examination.

A German paper printed in China recently gave considerable space to the Japanese development of Hunan province. To judge from this article it would appear that Japanese are almost the only foreigners in that part of China. They own property, engage in all sorts of trade, and are prominent as school teachers. Their shipping companies, mainly the Nisshin Kisen Kaisha, are gradually distancing the old British lines and will soon have the bulk of the trade.

India's Gold and Silver Coin and Bullion.

Consul-General William H. Michael, of Calcutta, reports that on June 15, 1908, the amount of silver held in the paper currency reserve in India was \$86,400,000, gold coin and bullion \$6,766,665, and silver bullion under coinage \$26,000,000. Gold coin held in the paper currency reserve in England, \$13,500,000; the silver held in gold standard reserve, \$20,000,000 (the permanent nucleus of its silver branch), and \$14,266,665 paid into the reserve out of the proceeds of sterling bills drawn on the Secretary of State, exclusive of \$6,633,330 held in deposit on account of further bills drawn but not yet presented for payment in London.

TRADE OF DALNY.

LARGE DECREASE IN THE IMPORTS OF STAPLE ARTICLES.

Consul Roger S. Greene furnishes the following information concerning the imports and exports of Dalny (Darien) during the first quarter of 1907 and 1908:

The imports and exports at Dalny during the first quarter of 1907 and 1908, by countries, were as follows:

Country.	Imports—		Exports—	
	1907.	1908.	1907.	1908.
Japan.....	\$1,924,408	\$2,201,102	\$1,378,272	\$2,345,516
China.....	586,242	630,913	604,997	1,908,724
Korea.....	64,529	.....	1,737	117
America and Europe.....	329,758	2,356,681	.....	401
Total.....	2,854,937	5,188,706	1,985,006	4,254,758

The large imports noted in the foregoing statement for the 1908 quarter are mainly due to the increased arrivals of railway materials (\$2,700,000), some of the staple articles of import showing the following decreases during that quarter: Cotton cloth, \$223,000; flour, \$260,000; kerosene, \$42,000. The increase in the exports occurred nearly altogether in beans and bean cake.

High Price of Beer in Brazil.

Consul George H. Pickerell, of Para, advises American brewing companies that the importation of beer into that part of Brazil is restricted owing to the high customs duties. These are collected on all foreign beers with the exception of one—"stout"—which is considered a medicine, and admitted at the former lower rate. No beer has been imported at Para for the last six months, and the stocks on hand are nearly exhausted, what remains being sold at nearly \$1 gold per bottle; the local product sells at 33 to 49 cents per bottle.

Notwithstanding the difference in the cost of foreign and native beers, consumption of the latter has not increased materially owing to the presence of and the fondness for the good grades of cheap wines imported from Portugal and France, and which sell at or about the same price as native beer.

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COTTON INDUSTRY IN FRANCE.

PRODUCTION AND EXPORT OF PRODUCTS—RELATIVE VALUE OF FOREIGN MARKETS.

In the following report dated Calais, July 4, Special Agent W. A. Graham Clark describes the extent of the cotton industry of France, explains the character of fabrics produced, quantities exported, and the relative importance of the foreign markets to which the principal products are sent. The report follows:

France ranks fifth in the manufacture, but third in the export of cotton goods. In 1907 France exported cotton yarn to the extent of \$3,183,537, and cotton goods to the extent of \$59,681,583, or a total export of manufactures of cotton of \$62,865,120.

The average value of the raw cotton imported into France in 1907 was 12.08 cents a pound, and the average value of the goods manufactured therefrom and exported was 42.54 cents a pound. French textiles are supposed to be especially distinguished by reason of the cultivated taste of their makers, and this is true of the finer grades of goods; so much so that goods have been shipped to France by competing nations so as to get a French mark on them before selling to other countries. One would therefore expect to find a high average value of export goods, but the actual average is lower than that of Germany, and of course much lower than that of Switzerland, which leads in this line. This fact is due to the circumstance that Germany and Switzerland ship mainly to Europe and the United States, while French manufacturers cater in a large measure to the cheap taste of their colonies and protectorates.

HAVRE AN IMPORTANT CENTER.

Havre is the great cotton import center for France and is the port most convenient to the spinning mills which lie mainly in Normandy and French Flanders. Marseille imports Egyptian and Asiatic cotton, but its trade is decreasing. The Vosges and Belfort mills buy largely through Bremen and Antwerp. Cotton futures are dealt in on the Havre market, which is not the case at Bremen. Cotton is usually quoted at Havre in francs per 50 kilograms (110 pounds). The cottons regularly quoted at Havre are American (all grades); brown and white Egyptian; Indian Surats (Hing, Oomra, Broach; Dholler, Bhowan); Tinnevely; Western. Coconada; Chinese; Brazilian (Fer,

Ceara, Carthagena); Turkish; Peruvian (both harsh and soft); Haitian and Tahitian. The French cotton manufacturer therefore has quite a variety from which to choose, and in the manufacture of cheap goods, especially dyed cloths for such countries as Algeria and Indo-China, he avails himself of this to lower the price of his goods by the mixture of the cheaper cottons with the regular American. Ordinarily France imports about 70 per cent American, 15 per cent Indian, 10 per cent Egyptian, and 5 per cent other cottons.

DUTY AND FREIGHT ON RAW COTTON.

The French import statistics divide the raw cotton imported in 1907 as follows:

	Pounds.
United States -----	437, 636, 600
India -----	86, 259, 270
Egypt -----	60, 395, 330
Turkey -----	6, 945, 024
Other countries and indirect -----	50, 865, 896
	642, 102, 120

The exact amount of each kind is not shown, as the cotton is credited to the country from which it arrives, and American, Indian, etc., is shipped from stock at Liverpool and Bremen. The raw cotton reexported from France goes to Germany, Belgium, and Spain, with smaller amounts to other neighbors.

France, like Germany and Austria-Hungary, admits raw cotton free, while Russia, Italy and Spain levy duties. On carded and gummed (wadding) cotton the French import duty is 20 and 15 francs per 100 kilos net for the general and minimum tariffs respectively. The bulk of the French cotton comes in at Havre and the freights charged thence to the cotton-manufacturing sections are as follows per 1,000 kilograms (2,205 pounds):

Havre to—	Francs.	Havre to—	Francs.
Rouen.....	6.00	Belfort.....	32.75
Lille.....	13.60	Lyon.....	40.00
Roubaix.....	13.80	St. Etienne.....	46.00
Nancy.....	25.00		

The railway freight paid by the mills in obtaining cotton from Havre, therefore, ranges from 5.25 cents per 100 pounds for the Rouen mills up to 40.3 cents per 100 for mills at St. Etienne.

EXPORTS AND IMPORTS.

Cotton goods exported from France obtain the reduced freight rate that is granted to all goods destined for export. The exports of cotton manufactures from France has increased about 250 per cent in the last ten years. The following list shows the export of French cotton manufactures for the years given, in millions of dollars:

	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.
Yarn.....	0.55	1.21	1.05	0.76	0.72	0.88	1.26	3.66	3.53	3.18
Goods.....	24.85	33.67	33.67	34.04	33.98	34.98	40.52	49.12	59.20	59.68
Total.....	25.40	34.88	34.72	34.80	34.70	35.81	41.78	52.78	62.73	62.86

In the same period there was imported into France cotton manufactures to the following extent, the figures representing millions of dollars:

	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.
Yarn	1.72	1.51	2.87	3.41	2.37	2.33	1.90	1.80	2.56	4.79
Goods	7.21	8.46	9.31	8.91	9.70	9.94	9.56	10.72	12.17	12.82
Total	8.93	9.97	12.18	12.32	12.07	12.27	11.46	12.52	15.08	17.61

The following table shows in detail the import and export of cotton and its manufactures in 1907:

	Imported.		Exported.	
	Pounds.	Value.	Pounds.	Value.
Cotton in bales	641,819,567	\$77,555,892	127,894,814	\$11,838,620
Carded laps and wadding	282,553	65,620	729,806	171,384
Total cotton	642,102,120	77,621,512	128,624,120	12,010,004
Single yarns:				
Gray	7,192,754	3,179,482	6,914,609	1,161,474
Bleached	665,398	26,827	1,294,680	147,645
Dyed or printed	431,764	71,217	712,388	149,575
Glazed	162,655	49,022		
Ply yarns:				
Gray	3,276,466	846,112	1,683,856	549,857
Bleached	666,930	408,177	1,611,344	544,260
Dyed or printed	1,056,818	163,065	1,536,629	623,778
Glazed	68,985	33,968		
Warp chains	7,494	1,930		
Mixed yarns	76,038	16,791	322	6,948
Total yarn	13,605,292	4,791,611	13,758,723	3,188,587
Cloth:				
Gray	2,836,768	391,404	11,517,222	3,023,152
Bleached	6,898,451	206,896	85,923,216	8,007,966
Dyed	13,202,621	290,465	48,355,980	12,277,116
Colored	122,542	30,494	2,219,428	771,421
Printed	2,588,818	657,551	3,802,033	752,121
Lace, machine made	315,172	1,885,996	1,672,739	12,604,830
Lace, hand made	61,712	1,668,678	22,040	526,811
Upholstery goods	407,079	214,280	9,184,288	6,297,011
Knitted goods of all kinds	2,530,192	2,600,904	8,830,326	4,836,808
Tulle	35,705	79,904	1,216,608	2,873,384
Trimnings	201,666	99,395	1,386,536	2,355,758
Embroidery, hand and machine	1,142,333	3,272,701	1,066,736	2,194,796
Ribbons	273,516	81,639	1,142,554	1,627,981
Curtains of tulle	5,290	11,194	154,721	578,614
Blankets	152,296	193	1,780,612	271,165
Cut and shaped goods	4,416,816	158,839	4,508,723	204,580
Twine, cord, etc	74,064	26,441	214,228	122,941
Velvet	349,114	148,303	381,512	98,991
Muslin embroidered for furniture or vestments	20,718	8,492	70,528	89,745
Lampwicks	49,810	12,738	269,108	67,550
Covers and quilts in piques and reps	29,093	25,283	60,169	63,304
Floor cloths	4,396,539	742,664	372,696	59,444
Embroidered muslin curtains	1,763	579	19,615	43,811
Table linen, dimity, damasks, etc	18,954	6,369	57,745	15,247
Tambour or gauze work	29,315	63,495	6,012	10,036
Gunny cloth	57,900	9,264	61,518	9,843
Percaline glazed binding	385,920	121,590	8,155	2,702
Banding for looms	5,290	1,544	3,526	965
Total cloth, etc	40,604,447	12,817,745	134,008,574	59,631,583
Total manufactures of cotton		17,609,356		62,865,120

THE PRINCIPAL FOREIGN MARKETS.

The most important markets for French cotton manufactures are, in order of value of takings, the United States, Algeria, Great Britain, Belgium, Indo-China, and Madagascar, followed by Germany, Argentine Republic, Senegal, Brazil, Turkey, China, and

Japan. Of the cotton goods shipped in 1907 the French export statistics record the takings of the larger countries as follows:

Country.	Pounds.	Value.
United States	6,059,678	\$12,888,733
Algeria	32,108,754	9,894,917
Great Britain	9,463,756	8,393,763
Belgium	9,218,671	6,457,780
Germany	2,071,760	2,158,319
Argentine Republic	4,019,876	2,063,134
Brazil	1,898,527	1,075,203
Turkey	1,969,494	850,165
Switzerland	1,018,840	665,271
Spain	753,106	341,803
Austria-Hungary	169,928	253,023
Italy	551,441	284,675
Russia	98,298	150,733
All others	64,611,435	14,214,064
Total	134,008,564	59,681,563

The average value per pound of the exports to the United States is seen to be \$2.13, while the average value of the exports to Algeria is only 30.8 cents. The first buys lace and the latter mostly cheap cloth.

In studying the export statistics one sees very plainly why it is that the average value of the French cotton goods exported is low, for it is shown that one-eighth of the yarn exported and nearly one-fourth of the cotton goods exported go to French colonies, dependencies, and protectorates. The French manufacturers depend on Algeria, Indo-China, Madagascar, Senegal, and Tunis for an outlet for a large proportion of their production, while smaller amounts are also taken by other French possessions, such as Martinique, French Guiana, Guadeloupe, French Kongo, etc. Their takings are mainly of cloth, and in fact about one-half of all the cotton cloth exported from France goes to her colonies and dependencies.

RELATIVE IMPORTANCE OF MARKETS.

The manufactures of cotton exported from France are, in order of value, as follows: (1) Cloth, (2) lace, (3) upholstery goods, (4) knit goods, (5) tulle, (6) yarn, (7) trimmings, (8) embroidery, (9) ribbons. The French manufacturers have found their best markets for the various lines in the following countries:

Unbleached cloth is sold to Algeria, Madagascar, and Indo-China. Bleached cloth to Algeria, Indo-China, China, and Belgium.

Dyed cloth to Algeria, Indo-China, Madagascar, Senegal, Argentina, England, and United States.

Colored goods are mostly taken by Turkey and Argentina.

Print goods are sold in Great Britain, Madagascar, China, and Indo-China.

Three-fourths of the machine-made lace is taken by the United States, while the remainder is monopolized by Great Britain and Germany. The hand-made lace goes to Great Britain, Germany, and the United States.

Upholstery goods find their markets in Great Britain, Belgium, and South America.

Knit goods go to Belgium, Mexico, Argentina, Brazil, Great Britain, and Algeria.

Tulles go to the United States, Belgium, and Great Britain, while tulle curtains go to Great Britain and Belgium.

About one-half of the yarn is taken by Belgium and Germany, while the remainder goes to Argentina, England, Algeria, etc.

Trimnings and passementerie in general are sent to Great Britain, Belgium, and Argentina, while embroidery goes to Great Britain, United States, and Spain.

Ribbons go to Great Britain, Belgium, and Argentina.

Table linen is bought by Belgium and velvet is shipped to Europe in general.

Made-up goods are taken by Great Britain and the United States.

Floor cloths are bought by Spain and Algeria.

Gunny sacks are shipped to Senegal, Morocco, and Madagascar.

Cotton blankets go to Great Britain, Indo-China, Algeria, Egypt, and South America.

Havre is the most important port for the shipment of cotton manufactures. The present (June, 1908) ocean freight rates on cotton piece goods from Havre to the ports below named are as stated in the following table, the figures representing francs per cubic meter, with the exceptions indicated:

Havre to—	Francs.	Havre to—	Francs.
New York.....	a 15	Alexandria.....	b 32
Yokohama.....	b 60	Smyrna.....	b 30
Shanghai.....	b 63	Beirut.....	b 37
Hongkong.....	b 60	Constantinople.....	b 30
Singapore.....	b 45	Athens.....	b 30
Rangoon.....	b 60	Naples.....	b 30
Calcutta.....	b 45	Valparaiso.....	c 75
Bombay.....	b 35	Mollendo.....	c 80

* Per cubic meter.

† Plus 2 francs per 1,000 kilos.

‡ Per 40 cubic feet, plus 10 per cent.

TREE COTTON IN MEXICO.

OUTLOOK FOR ITS CULTIVATION ALONG THE RIO GRANDE.

Consul Clarence A. Miller, of Matamoros, furnishes the following information concerning tree cotton in the Rio Grande district of Mexico:

As in southern Texas, the production of cotton in this district is greatly curtailed by the boll weevil.

During the last few years a few cotton trees have grown up, and their success in this locality may possibly lead to their further introduction and cultivation. Practically no attention was paid to any of these trees, yet all of them seemed to be fairly successful. The most encouraging feature is that the cotton was ready to be picked about June 1. This early maturity is supposed to be the best preventative against the boll weevil. It is said that no weevils were noticed on any of the trees, but this can not be vouched for.

It might be advisable to experiment with the cotton tree on the Lower Rio Grande Valley on the Texas side of the river. It may be possible that the tree would not be affected by the occasional light frosts of that vicinity.

The cotton is a short staple variety, about one-half or three-fourths inch long, but the fiber is strong, and the seeds clean and black.

[Samples of the tree cotton, transmitted by Consul Miller, have been received at the Bureau of Manufactures.]

INTERNATIONAL AGRICULTURAL INSTITUTE.

RECENT MEETING AT ROME OUTLINES THE PERMANENT ORGANIZATION.

In compliance with the request of Mr. David Lubin, the permanent delegate of the United States to the International Institute of Agriculture at Rome, Ambassador Lloyd C. Griscom furnishes the following report of the first session of the permanent committee held in the Italian capital from May 23 to June 6:

The committee brought together a number of distinguished men. Great Britain was represented by the permanent undersecretary of agriculture; the Russian delegate was a former minister of agriculture; Count Faina, the Italian delegate, who was elected president of the permanent committee, is president of the Italian Royal Agricultural Commission. Several countries were represented by their ministers plenipotentiary in Rome, and the delegate of the German Empire was the commercial attaché of the German Embassy in Rome. The full list of delegates accompanies Mr. Lubin's report.

At the opening of the meeting it was seen that all the Powers unanimously desired to proceed very cautiously and conservatively in the organization of this institute. The general desire was to create a good international statistical bureau where a summary of the world's production would be accurately compiled.

CONSERVATIVE STEPS OF THE ORGANIZATION.

A number of visionary propositions have been attributed to this institute in the public press and elsewhere, but at the meeting of the committee not a single radical suggestion was made. The committee rapidly discussed a proposal for the organization of the institute, which is to be submitted at the next meeting of the general assembly of the institute. The committee adjourned to sit again on November 10, and the general assembly of the institute will be called again on November 20, to sit until the last of that month.

A committee of eight was appointed to carry on certain work between the adjournment and the November session. Our delegate, Mr. Lubin, was made a member of this committee, and he has been asked to present at the November meeting the ideas of the United States Government as to how the institute should be organized. It is therefore expected that Mr. Lubin will be fully equipped in November to speak for our Departments of Agriculture and Commerce and Labor.

I derived a general impression from all the delegates with whom I came in contact that they came to the recent meeting of the permanent committee very doubtful as to whether any really valuable results would come out of this institute. After meeting and exchanging ideas they went away with a much more hopeful feeling.

A meeting of so many intelligent men has developed a number of valuable ideas and the impression became general that the institute will have a useful mission. The real value of the recent meeting was in the personal contact and exchange of views between the delegates.

In regard to the meeting of the general assembly called for in the autumn I may point out that we will be expected to be represented

by from one to five delegates. In this connection it is to be hoped that the Departments of Agriculture and Commerce and Labor will see fit to be represented by distinguished delegates who should have at their disposal some expert advisers. One of these experts might remain in Rome as our permanent delegate if it is thought advisable. All the ambassadors in Rome of the various powers will doubtless be delegates to the general assembly.

BRITISH FOREIGN TRADE.

MARKED DECREASE IN BOTH THE IMPORTS AND EXPORTS.

The following table from the British Board of Trade Journal gives the values for the first six months of 1908 of the imports and exports of the United Kingdom, with increases or decreases, as compared with the corresponding period of 1907:

Articles.	Imports.		Exports.	
	1908.	Increase (+), decrease (-).	1908.	Increase (+), decrease (-).
Food, drink, and tobacco:				
Grain and flour.....	\$175,687,673	+\$15,204,746	\$8,256,679	+ \$1,504,902
Meat, including animals for food.....	118,700,880	- 8,314,201	2,404,912	- 518,715
Other food and drink.....	270,043,687	+ 6,507	30,558,044	- 1,287,914
Tobacco.....	11,377,143	+ 2,966,592	3,171,031	+ 344,967
Total.....	575,809,383	+ 9,862,644	44,390,666	+ 43,240
Raw materials and articles mainly unmanufactured:				
Coal, coke, and manufactured fuel.....	10,813	- 82,166	100,335,254	+ 8,996,655
Iron ore, scrap iron, and steel.....	11,880,280	- 6,462,698	966,881	- 797,878
Other metallic ores.....	22,722,112	- 3,044,517	188,961	- 306,967
Wood and timber.....	44,119,306	- 1,731,949	248,625	- 8,210
Cotton.....	150,934,970	- 52,835,566	.....	.....
Wool.....	98,366,801	- 24,965,033	5,385,308	- 2,177,102
Other textile materials.....	6,490,535	- 15,990,765	688,041	+ 20,172
Oil seeds, nuts, oils, fats, and gums.....	69,425,611	- 4,395,180	7,478,779	- 286,397
Hides and undressed skins.....	22,293,549	- 4,952,899	3,354,547	- 1,878,319
Materials for paper making.....	10,465,287	+ 1,067,053	1,206,778	- 676,804
Miscellaneous.....	55,294,429	- 10,998,981	4,941,128	- 1,761,717
Total.....	517,003,692	-124,403,321	124,793,302	+ 1,125,443
Articles wholly or mainly manufactured:				
Iron and steel, and manufactures thereof.....	17,861,442	+ 2,048,067	93,734,066	- 21,402,191
Other metals, and manufactures thereof.....	59,732,750	- 14,036,315	21,567,569	- 10,363,704
Cutlery, hardware, implements (except machine tools), and instruments.....	9,198,118	- 177,953	13,650,990	- 1,442,007
Electrical goods and apparatus (other than machinery and telegraph and telephone wire).....	2,835,593	- 241,165	4,097,521	- 1,416,059
Machinery.....	13,116,736	- 231,456	76,672,414	+ 4,007,281
Ships (new).....	49,478	+ 7,154	24,351,339	- 2,764,156
Manufactures of wood and timber.....	5,057,360	+ 537,082	2,834,133	- 248,795
Yarns and textile fabrics:				
Cotton.....	23,423,365	- 1,081,594	246,337,495	- 12,797,684
Wool.....	24,612,018	- 2,848,115	71,516,970	- 10,147,709
Other materials.....	49,423,479	- 5,395,055	29,336,138	- 11,073,580
Apparel.....	10,233,286	- 1,621,985	20,651,767	- 1,157,702
Chemicals, drugs, dyes, and colors.....	24,972,844	- 3,431,516	42,369,662	- 1,657,729
Leather, and manufactures thereof (except boots and shoes).....	26,086,722	+ 758,707	8,803,747	- 2,035,263
Earthenware and glass.....	9,001,517	- 610,664	9,146,548	- 344,986
Paper.....	14,430,331	+ 1,331,684	5,684,383	+ 53,659
Miscellaneous.....	63,566,082	- 6,030,071	71,301,632	- 7,155,687
Total.....	353,601,121	- 31,023,195	742,056,374	- 79,946,212
Miscellaneous and unclassified (including parcel post).....	5,293,054	- 675,310	13,362,524	- 63,581
Total value imports.....	1,451,707,250	-116,239,182	924,602,866	- 79,441,110

TRADE-MARKS.

JAPAN.

AGREEMENT RATIFIED COVERING FAR EASTERN TRADE.

Information has been received at the Department of State by cablegram from the American embassy at Tokyo that the Japanese Government had ratified the trade-mark treaty between the two countries, which included features in regard to goods in Korea and China. The text of the treaty was published in Consular and Trade Reports for April 16.

A communication from the Department of State concerning trade-marks suggests that the present occasion presents an excellent opportunity to impress upon Americans that in Japan the system is priority of registration and in the United States a priority of use, and that the Japanese is the one in use in a majority of countries; consequently, every American who wants protection for his industrial property in China, Japan, and Korea should register at the earliest possible moment at the Tokyo patent office.

Japan is disposed to recognize priority of use by a liberal interpretation of the existing laws, such as by refusing to entertain wrongful registration and by even going so far as to cancel registrations previously made.

An American whose trade-mark or other such right has been pirated should lose no time in seeking registration and in moving for the annulment of the wrongful registration from which his business is suffering. If these points impressed themselves upon those most interested, the benefits of these conditions would be great, but conditions can accomplish little where the interested beneficiaries are too indifferent or apathetic to avail themselves of the protection afforded them.

CHILE.

AMERICAN MANUFACTURERS LOSE BY FAILURE TO REGISTER.

Consul Alfred A. Winslow, of Valparaiso, gives the essential features of the Chilean laws governing trade-marks in that country, and urges registration by American manufacturers. He says:

American manufacturers are losing much in Chile and will find themselves badly crippled when they really get into this field in earnest after business because they have not registered their trade-marks, or the names given their special brands of goods.

Attention should be given this matter, because as the different American goods become better known the greater will be the temptation to take an unjust advantage. Any person may register a trade-mark here, even after a certain brand of goods has been in the Chilean market for several years, and thus drive the original maker of the goods from the country, unless the brand or trade-mark was registered in time.

I append a careful translation of the law now in force bearing on these matters:

1. A register is open for the registration of trade and commercial marks, both national and foreign.
2. The name "trade-mark" is used to designate the marks placed by the manufacturers or producers on manufactured articles, either Chilean or foreign,

while the name "commercial mark" designates the mark placed on the articles by the merchant who sells them.

3. Proper names, emblems, or any other signs adopted by a manufacturer or merchant to distinguish the article he makes or sells, will be considered as trade or commercial marks. In addition, they must carry the inscription "Marca de Fabrica," or the initials "M. de F.," or "Marca Commercial" (M. C.).

4. The name given a country estate, foundry, factory or mill shall be the exclusive property of the owner of the said estate, foundry, factory, or mill.

5. The person registering a trade or commercial mark has the sole right to use the same.

6. Transfers of marks, or permission that may be given to others to use said marks, must be noted in the register and advertised for ten days in the newspapers.

7. Registration must be renewed after ten years, otherwise it becomes void.

8. The register referred to will be opened in the office of the National Agricultural Society, under the direction of the president of the society and a delegate named by the council, who must be a member of the board of directors of the society.

9. The entry in the register must state the day and hour in which the entry is made; the name of the proprietor, his name and domicile; the name of the place where the factory is established; the class of goods or commerce designated by the mark, and a facsimile of the mark. To this must be added the number of the order that corresponds to the mark deposited, and any other data that may be thought necessary. Both the register and the copy thereof given to the interested party must be signed by the president of the agricultural society or his deputy, by the interested party, and two witnesses.

10. A fee of 12 pesos will be paid to the society for the entry of a trade-mark, 3 pesos for a commercial mark, and 1 peso for an authenticated copy of the inscription.

11. Any person falsifying or making fraudulent use of a trade or commercial mark spoken of in the present law will be subject to the penalties prescribed by the penal code.

12. Articles bearing false marks will be confiscated for the benefit of the injured party, while the instruments of falsification will be destroyed.

13. A list of the marks registered will be published in August of each year.

COMPETITION AMONG TUBE MAKERS.

THE ENGLISH, GERMANS, AND AMERICANS IN A RATE WAR.

Consul Albert Halstead, of Birmingham, under date of July 11, sends the following extract from the Post of that city, in which complaint is made against the present ruinous war in prices among tube makers:

British tube makers report that the war of prices in the trade is having disastrous consequences for all concerned in the industry. The export branch is suffering in greatest measure, for in that field the competition of Continental and American makers has to be faced, but even in the home section competition has also to be reckoned with, though not so keenly. All list quotations have gone by the board, and each individual transaction has to be negotiated very much at the dictates of buyers. In some cases prices have been reduced as much as 25 per cent on the net of the terms that were commanded a couple of weeks ago. Never in the experience of many of the oldest makers in the trade have things been at the ruinous stage now common. It is added that on the bulk of the new work being booked money is being lost. Lower prices than are now quoted have ruled before, but when costs are considered the actual net returns were never poorer than at present. The prospects for producers are serious, indeed, and there is, it appears, no hope of an early arrangement. Consumers, while benefiting, are not in the position through lack of work to take full advantage of the opportunity that is at their command, but several firms who have an outlet for standard sizes are said to be laying in stock. That will tell against demands when affairs once again return to their normal state, which, unpropitious as the outlook at present is, may come much sooner than "the man in the street" would be inclined to anticipate. If something in that direction is not done speedily, disaster is inevitable in more than one center of production.

CEYLON PLUMBAGO TRADE.

HEAVY DECLINE IN DEMAND WHILE PRICES REMAIN FIRM.

Consul E. A. Creevey, of Colombo, reports that the trade in plumbago, of which Ceylon is the world's chief producer, has suffered perhaps more than that in any other commodity since the beginning of the business depression which, following the financial disturbance in New York, has since been experienced in Great Britain and Europe. The consul's details follow:

For the first quarter of the current calendar year the exports of this article to the United States were considerably less than one-third the value of those for the first quarter of 1907, although the average price has fallen only 10 per cent. Dealers say that there are no considerable orders in sight, and they have no hopes for a revival of demand until the stocks accumulated in Europe and the United States have been exhausted.

The steadiness of prices is due to the fact that there are no great stocks above ground. When the depression was first felt, the majority of the mine owners suspended production, and at present only those mines are worked in which it is necessary to maintain operation to prevent flooding.

In the first half of 1907 exports were on a par with those of the first half of 1906, which were the greatest ever recorded. Orders began to fall off in July, and the decline, except in October, has since been steady. However, the total quantity exported in 1907 was greater than that exported in 1899, which had been the record year until 1906.

DECREASE IN SHIPMENTS.

The net decrease in plumbago exports for 1907, as compared with 1906, was 51,729 hundredweight. Exportations to the United States, which has long been the greatest consumer of plumbago, showed a decrease of 22,886 hundredweight, those to Great Britain a decrease of 17,517 hundredweight, and those to Germany a decrease of 27,261 hundredweight. The trade with Belgium, on the other hand, increased, exports to that country showing a gain of 16,419 hundredweight over 1906.

The exportations for 1907, as shown by the Ceylon customs returns, were:

	Hundred-weight.	Value.		Hundred-weight.	Value.
United States	290,417	\$1,326,237	Other countries	14,005	\$63,957
United Kingdom	169,857	775,680			
Germany	100,012	456,721	Total	650,116	2,968,868
Belgium	75,825	346,268			

Japan, Russia, and France each buy plumbago in small quantities. The 1907 average price was slightly lower than the average price of 1906.

On the foregoing exportations the Ceylon government collected export duty to the amount of \$54.182, at the rate of 25 rupee cents (\$0.0811) per hundredweight; this tax realized \$4.306 less than in 1906.

VARIATION IN STATISTICS—CURRENT PRICES.

The principal exportations in the first quarter of 1908 were:

	Hundred-weight.	Value.		Hundred-weight.	Value.
Great Britain	35,918	\$164,025	Belgium	16,138	\$73,697
United States	24,691	112,755			
Germany	24,189	110,563	Total	100,936	461,040

The values quoted are those shown by the Ceylon customs returns, in which they are based upon a fixed valuation of \$91.33 per ton of 2,240 pounds. The value of the exports to the United States in the first quarter of 1908 is shown by the invoice register of this consulate to have been \$115,160. This computation is made from invoices showing the actual amounts paid. The value of plumbago sent to the United States in the first quarter of 1907, as shown by the invoice register, was \$419,207.

The average prices per long ton of the various qualities of plumbago for the calendar year 1907 were: Flying dust, \$25; dust, \$33; chip, \$85; ordinary lump, \$112; large lump, \$112. The price of plumbago is regulated not only by the form in which it is sold, but by the percentage of carbon found in each lot as well. Prices of different qualities prevailing in 1907, percentage of carbon being 40 to 95, were: Flying dust, \$15 to \$75; dust, \$12 to \$50; chip, \$50 to \$140; ordinary lump, \$67 to \$200, and large lump, \$80 to \$200.

BELGIAN APPLE CROP.

LARGE YIELD CAUSES LOW PRICES—LAST YEAR'S EXPORTS.

Consul H. Abert Johnson, writing from Liege, gives the following information on this season's yield of apples in Belgium and the trade in this fruit:

The apple crop this year in the valley of the Meus promises to be especially abundant. It is reported that fruit is being bought on the tree for 2½ to 3 francs per 100 kilos, or 48 to 58 cents for 220 pounds, exclusive of all charges for picking and shipping the fruit.

It is noticed that the German fruit merchants who each mid-summer visit the fruit-growing district of Vise-Tongre and Maestricht have this season been absent. Their failure to make the usual visit to the fruit-growing section of this part of Belgium is due to the fact that the apple crop in the Grand Duchy of Luxembourg and in Alsace and Lorraine is also especially large, thus furnishing supplies, with lower shipping charges, notwithstanding the low Belgium prices.

Belgium exported last year 36,472,779 pounds of apples, valued at \$815,914. Of these exports 20,666,901 pounds, valued at \$507,669, went to Germany; 6,803,751 pounds, valued at \$162,203, were shipped to Great Britain, while 4,886,024 pounds, valued at \$109,303, were sent to Holland, and 2,013,400 pounds, valued at \$45,141, were shipped to France.

The total value of the imports of apples into Belgium during the past year was \$247,233, these imports coming chiefly from Holland and France.

PROGRESS IN SOUTHERN FRANCE.

COMMERCE, CONSTRUCTION WORK, AND RESORTS OF LOWER PYRENEES.

Consular Agent Frederic E. Gibert, of Biarritz, has prepared the following interesting account of the present commercial situation and development in the French Department of Basses-Pyrenees:

The Department of the Lower (Basses) Pyrenees, with a population of 424,446, possesses the only seaport on the French Atlantic coast between the city of Bordeaux and the Spanish frontier. This seaport of Bayonne is one of the oldest towns and ports in the country, and is from an archaeological standpoint of great interest. As a commercial center it takes nearly all the export trade of the western Pyrenean district, some going through Bordeaux. This trade increases steadily, having risen from 80,000 tons in 1848 to 795,320 tons in 1906.

Unfortunately Bayonne possesses no direct transport lines, except to England, Spain, and Belgium; merchandise for other countries is transshipped from the local lines or sent on by rail to Bordeaux or Havre, so that the main marine traffic is the coastwise carrying trade.

The port is now accessible for vessels of from 3,500 to 4,000 tons, drawing 20 to 25 feet, with length not exceeding 300 feet. Large sums are constantly being spent in improving the entrance, the docking and loading facilities, and the access by rail and water from the interior.

INDUSTRIES, AMERICAN TRADE, AND RAILWAY BUILDING.

Industrial interests comprise important factories at Boucau, a suburb of Bayonne on the Adour, and numerous mills, marble quarries, iron, coal, and copper deposits, and fisheries, from Bayonne to Hendaye.

Direct shipments to the United States from Bayonne have practically ceased since November, 1907. During 1907 a considerable quantity of ferro-manganese and a large amount of Pyrenean wool were exported to New York, Boston, and Philadelphia. There arrived from the United States during the eighteen months ended July 1, 1908, only seven vessels—all British—bearing the usual cargoes of grain, phosphates, and Georgia pine.

A certain interest is presented to American manufacturers by the construction, in progress and projected, of an unusual number of steam and electric railway and tramway lines. Of the former there are at least ten on the point of being begun; of the later perhaps half as many. The most important is that designed to connect Biarritz with Bayonne by a new route, there being already two steam connections, and then continue down the coast some 20 miles, joining the Spanish line to San Sebastian and Bilbao, thereby opening up building sites of great value and a country rich in opportunities.

INCREASING TOURIST TRAFFIC MAKES ACTIVITY.

Tourists within the last three years have come to know the great number of winter and summer resorts which exist in the region. These, with the exception of Pau, have been hitherto almost unknown to Americans. A great effort is being made on all sides to meet modern requirements, those of a constantly changing and an increasing cosmopolitan wave of population. At Biarritz during 1907 there were registered more than 35,000 visitors. Reckoning on another 20,000 for Pau, and allowing for those at other places, it may be safely said

that 100,000 persons visit the department in the course of the year. During the season, which continues eight months of the year, there are between 300 and 400 automobiles; at Pau during the winter nearly as many. Besides a dozen large hotels in existence for the past twenty years, there was built in 1904 one costing nearly \$1,000,000, another costing about \$500,000, and four smaller ones costing from \$100,000 to \$300,000. Ground is now being broken for two others to cost respectively \$1,000,000 and about \$800,000. The building activity at Biarritz may be taken as an example of what is going on all over the department.

American residents probably consist of 100 families, but transient Americans on their way to and from Spain and the Pyrenees are very numerous and steadily increasing. The entire district of the middle and the western Pyrenees may be considered as now undergoing a lively transition to the conditions and requirements of the present day.

ONTARIO GAME LAWS.

CANADIAN PROVINCIAL REGULATIONS IN A RICH HUNTING REGION.

Consul A. G. Seyfert, of Owen Sound, sends the following review of the hunting and fishing regulations of the Canadian Province of Ontario:

The highlands of Ontario include the famous Muskoka Lake district east of the Georgian Bay, where game and fish are abundant. Every season many American sportsmen go there to fish and shoot. The open season for deer lasts but fifteen days, yet last fall during that period 12,500 deer were killed, which is sufficient evidence of the abundance of game in this region. The Ontario fish laws make the open season for bass and muscalonge from June 16 to April 14; pickerel or dore, May 16 to April 14; salmon trout, December 1 to October 31; speckled trout, May 1 to September 14.

The law also provides that each person may not catch or kill in one day more than 8 black bass or gree, which must be over 10 inches in length; 12 pickerel, which must be over 15 inches in length; 4 lake trout, or 30 brook trout, which must be over 6 inches in length. Not more than 25 pounds of trout can be shipped by one person during the season. Sportsmen from the United States are not charged any license for fishing in Canadian waters when Canadian boats and guides are employed.

The open season for hunting deer, moose, reindeer, and caribou is from November 1 to November 15; for bear, all the year; for duck from September 1 to December 31; for grouse, pheasants, partridge, woodcock, and railplover from September 15 to December 15. The license for a nonresident to hunt deer, moose, reindeer, or caribou is \$50 for a season and \$25 for smaller game. With each license are given two coupons, one of which must be attached to each deer killed when shipment is made. Not more than two deer, one bull moose, reindeer, or caribou are allowed to be killed by each hunter during the season. Persons visiting Canada for hunting or fishing may bring with them outfits comprising guns, fishing rods, canoes, tents, camp equipments, cooking utensils, etc., by depositing the duty on the appraised value of the articles imported with the Canadian collector of customs at the port of arrival, which deposit will be returned in full provided the articles are all exported from Canada within six months.

BRITISH CORPORATION LAWS.**HOW THEY AFFECT COMPANIES INCORPORATED IN OTHER COUNTRIES.**

Vice-Consul-General Richard Westacott, of London, transmits a copy of the British Companies Act of 1907, a portion of which is of interest to Americans on account of the provisions relating to registration and reports covering specified features of operations on the part of foreign corporations. Following is a summary of that section of the act which relates to foreign companies doing business within the United Kingdom:

In August, 1907, the British Parliament passed an act, operative July 1, 1908, amendatory to the United Kingdom's laws relating to companies and corporations, both private and public. The act provides for careful supervision by the Government over public companies for the purpose of requiring compliance on the part of companies' officers with regulations that will enable stockholders and prospective purchasers of stock to obtain legitimate and necessary information of the financial status of a company. The following provisions of the act apply to companies incorporated outside the United Kingdom but doing business within the Kingdom:

Every company incorporated outside the United Kingdom which at the commencement of this act has a place of business in the United Kingdom, and every such company which after the commencement of this act establishes such a place of business, shall within three months from the commencement of this act, or within one month from the establishment of such place of business, file with the registrar a certified copy of the charter, statutes, or articles of association of the company, a list of the directors, the names and addresses of one or more persons resident in the United Kingdom authorized to accept on behalf of the company service of process and any notices required to be served on the company. Companies must notify the registrar of any changes in the charter or articles of association, the change of directors, or change of address of persons on whom process may be served.

COMPANY TO ADVERTISE COUNTRY IN WHICH IT IS INCORPORATED.

Foreign incorporated companies shall file once each year with the registrar such a statement of their affairs as would be required under this act if they were incorporated within the United Kingdom.

A "limited" company issuing a prospectus soliciting subscriptions within the United Kingdom for shares of its stock must state in the prospectus the country in which it is incorporated. The name of the company and the country in which it is incorporated must be conspicuously exhibited at the place of business and printed on the stationery used by the company. Failure to comply with these provisions will subject the company to a fine of £50 (£1=\$4.86) and £5 a day until compliance is made.

ACCORDING to the American Iron and Steel Association the pig iron production of the United States in the first half of 1908 was 6,918,004 gross tons, against 12,303,317 tons in the last half of 1907 and 13,478,044 tons in the first half of 1907.

FOREIGN TRADE OPPORTUNITIES.

[Inquiries in which addresses are omitted are on file at Bureau of Manufactures. In applying for addresses refer to file number.]

Consuls are requested to contribute to this department.

- No. 2511. Cotton-seed products, feedstuffs, and sirup.**—A letter has been received from one of the special agents in which he gives the names of commercial agents in a certain European country who desire to represent American exporters of cotton-seed cake, cotton-seed oil, linters, gluten feed, and other feedstuffs, and also sirup.
- No. 2512. Brewery machinery, brew materials, and bottlers' findings.**—An inquiry has been made of one of the American consular officers for catalogues and quotations on brewery machinery, particularly prices on a brewery filter of a capacity of 500 gallons per 24 hours, and on hops, malt, bottles, corks, bottle caps, wires, labels, and other bottlers' findings.
- No. 2513. Harbor improvements.**—An American consul in the Orient writes of the harbor improvements to be made at the place in question. The principal work will be the extension of wharves, the building of a new landing, the improving and completing of the breakwaters, the building of retaining walls, and the filling in of a considerable area. A set of plans, etc., of this work are filed with the Bureau of Manufactures and will be loaned to contractors interested in bidding on these improvements.
- No. 2514. Kentucky and Virginia leaf tobacco.**—An important tobacco manufacturer in Europe has stated to the American consul that he would like to communicate with American dealers in Kentucky and Virginia leaf tobacco. The consul states that should this venture prove to be successful, other tobacco manufacturers in the European country in question will discontinue making their purchases through commission houses there and will place their orders directly with the American dealers.
- No. 2515. Plumbers' supplies and cast-iron pipe.**—One of the American consuls stationed in the Far East reports that the waterworks of a certain city there will soon require a large quantity of plumbers' supplies, and that a prominent contractor of that city wishes to receive catalogues and net prices on such supplies, especially on improved types of faucets, etc., and prices on cast-iron water pipes.
- No. 2516. Crockery and china ware.**—A business man in Latin America desires to represent some large American manufacturer of crockery and china ware who would be willing to send him a line of samples which would be properly secured. The consular officer making this report states that it would be an excellent opportunity for some American manufacturer of such wares to introduce his goods in that region.
- No. 2517. Machinery for cement manufacture.**—An American consul in the Orient reports that, in consequence of the continued expansion of the manufacture of cement in his consular district, there appear to be openings for the sale of American machinery for grinding, sifting, and drying cement. The rapid completion of the enlargement of one plant is expected and other factories are contemplated. Machinery for the new installations, as well as for renewals, will be required. He gives the names of some American firms having agencies in the district who may be communicated with in regard to the sale of such machinery.
- No. 2518. Hickory handles, etc.**—The contract for the construction work on the extension of a railway line in the British Isles has been recently placed. The consul states that the firm holding the contract will lay the entire permanent way, furnishing all the supplies and materials except sleepers and rails. He further states that there will be a special opportunity for the sale of American 36-inch hickory navy pick shafts, 30 and 36 inch hammer shafts, also necessary timber.

THE Canadian dairy commissioner states that in 1907 the value of the Dominion's production of creamery butter and cheese was \$36,000,000, of dairy butter \$22,000,000, of condensed milk \$1,000,000, and of milk for consumption \$35,000,000. He adds that while the dairy product exports have declined several million dollars since 1903 the home consumption has increased in much greater ratio.

AMERICAN TRADE IN MEXICO.**SUGGESTIONS AS TO THE BEST MEANS FOR ITS ENLARGEMENT.**

In reply to many correspondents as to the best means by which American trade in Mexico can be extended, Consul Clarence A. Miller, of Matamoros, furnishes the following information:

According to a recent issue of a Mexican newspaper, suggestions worthy of consideration on the part of American exporters seeking enlarged or new trade in Mexico were given by one of the consuls of this Republic in the United States in an address to a commercial club in a western city. In this connection manufacturers and exporters must bear in mind when reading these suggestions that the Mexican consul addressed a commercial club interested solely in its local manufactures and products and that the suggestions might need some modifications when applied to the general manufacturing and productive interests of the United States.

The suggestions of the consul, which contain much that is worthy of the consideration of manufacturers and exporters of the United States in general, are as follows:

The establishment of a commercial agency in Mexico City, with clerks thoroughly conversant in the Spanish language to conduct the business correspondence. The club should have traveling salesmen who speak the Spanish language and who are familiar with the trade conditions and the wants of Mexican merchants.

The traveling salesmen could carry samples of the lighter classes of goods, but machinery, farming implements, and other heavy classes of manufactures should be on display in two or more of the principal cities, where men should be kept to demonstrate the use of machinery. Agriculture is rapidly developing in Mexico, and there is a strong demand for improved farming machinery.

The consul believes that it would be a great advantage for manufacturers to maintain agencies and distributing centers in the City of Mexico and in Monterey, both being important railway centers. Monterey could be a distributing point for northern and western Mexico and the City of Mexico for central and southern Mexico.

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FARM IMPLEMENTS.

GERMANY.

WORK OF AGRICULTURAL ASSOCIATIONS—ADVANTAGES OF ANNUAL EXHIBITS.

The prevalence of agricultural associations in Germany, the benefits derived by manufacturers of farm machines, and the relative merits of certain implements in use are set forth by Special Agent Roland R. Dennis in the following report from Dresden:

There exists at present some 4,000 agricultural associations in Germany. As early as 1872 some effort was made to bring these associations together for the benefit of the farmers, but it was not until 1883-5 that the German Agricultural Society was formed. On October 1, 1885, there were only 2,500 members. This number had increased to 11,052 on October 1, 1895; to 15,272 October 1, 1905, and had reached 16,459 October 1, 1907. An average of the last three years shows income in round figures of \$331,000 and disbursements of \$305,000, showing a net gain of about \$26,000, notwithstanding a loss of over \$12,000 charged up to the shows. From a table furnished by the acting secretary I learn that the Empire is divided into three principal divisions—east, west, and south—and the shows are held in each one of these divisions in succession. The smallest attendance since 1887 was at Königsberg in 1892, when it only reached 44,287 in the six days, Sunday included, that the show was running. In 1906 at Berlin the attendance was 325,906. In the twenty-one years, 1887-1907, only in five years has there been a balance on the credit side from the shows, and this has never exceeded \$8,863, while on the debit side the amounts have run as high as \$36,000.

The society is organized on a broad and liberal scale, doing much for the farmers of Germany that our State agricultural departments do for American farmers. Great attention is paid to securing good and healthy seed grains, as well as supplying thoroughly reliable artificial manures.

THE SHOW AT STUTTGART.

The show at Cannstatt-Stuttgart this year was arranged on a long, narrow plain adjoining the Neckar River, easily accessible from the city by a capital trolley service, and reached by carriage or auto after a delightful drive through a park which extended from the center of the city to the show yard. The plot of ground was too long and nar-

row to make a high-class show yard, and was interspersed with too many and too wide streets. All this had the tendency to impress one with the idea the show was too spread out and would have been much more effective and much easier to see had it been more condensed. This show was seven-eighths German, the balance largely American and Canadian, the English being only represented by two engines and one mower and reaper works and smaller exhibits of side-delivery rakes, tedders, etc. In mowers, reapers, and binders the catalogue showed the following figures:

	United States.	Germany.	England.	Sweden.	Canada.	Total.
Mowers	47	42	7	5	10	111
Reapers	18	16	2	1	6	43
Binders	13	3	2	.....	3	21
	78	61	11	6	19	175

A word of caution to our manufacturers of this class of implement should be expressed. There seems to be a growing tendency on the part of all of our manufacturers to make petty savings that can not aggregate any considerable sums, while our German competitors are putting their machines on the market as finely painted as any we ever sent to this side of the ocean. I noticed that two of our best and always most fastidious works are putting plain maroon levers on bright vermilion mower frames. One factory in Germany claims, and I do not hear the claim disputed, to have built 6,000 mowers for the season of 1908, and this establishment started only a few years ago without any previous experience in the business except that acquired in dealing in American-made machines for a long term of years. One of the largest and most influential plow and general-implement works in the country has just started in the harvesting machinery line and exhibited one each of their new mowers, reapers, and binders. I am quite confident that they will have more or less, probably more, trouble with some of the "improvements" which they have introduced into the machines they have "absorbed," but it must be admitted that they were well made, business-like looking machines.

TRACTION ENGINES AND THRASHERS.

In portable and traction engines and thrashing machines the ascendancy of the German makers over their former competitors is probably more marked than in any other branch. Twenty years ago this line of business was practically all done by four or five of the prominent north of England makers. The catalogue of the Stuttgart show only contains the names of two of these English firms exhibiting 4 portables, while the Germans had no less than 44. Steam thrashing machine figures are even worse than this for the English, as only one firm had 2 machines exhibited by their Hamburg agency, and the Germans had 28.

Of the new implements an English side-delivery rake, built entirely of metal, attracted a great deal of attention, and considerable sales were reported as having been made in them. A second rake of this class from another well-known English maker was shown, but it was reported that the machine had not handled the crops at all well where it had been tried here on the Continent. This seems to be an implement

that is coming strongly in vogue. As reported from North Africa, the side-delivery rakes sent from the United States are all rated as too heavy and require more than one ordinary horse.

CONSTRUCTION OF STEAM THRASHERS.

Nearly all of the steam thrashers shown had long straw presses attached to the tail of the machines. Virtually all of the steam thrashers sold on this side of the ocean use "rubber" and not "pin" drums, the grain being fed in sideways and not end-on, as in the United States. To within a very short time great elevating carriers have always cared for the thrashed straw, wind stackers never having acquired any great hold of the trade, as they broke the straw too much. These long straw presses are fitted generally with three Appleby knotters acting in connection with straight needles working vertically. As the straw comes from the machine it is pressed into bundles of any sizes required, and when the bundle reaches the tripping device the needles act. The binding is done with a fairly heavy binding twine. If the straw is to be used on the place one string is put around the bundle, the middle needle of the three only being used, but for transportation the two outside needles are used, putting two bands around the bundle. The presses are arranged to collect all the short straw that comes from the thrasher and bind that in with the long straw, thus really dispensing with any hand labor at the tail of the machine. The thrashers are also fitted with self-feeders and band cutters.

AN EFFICIENT POTATO DIGGER.

A potato digger for two horses, quite different from anything made in the United States, was highly spoken of as able to handle heavy crops very easily and to leave the potatoes all on top of the ground entirely out of the way of a second round. This is a strongly built two-wheeled truck with a well-braced shovel, supported by a shoe which passes under and raises the potatoes. At the rear of this shovel are six revolving arms, driven by a plain bevel wheel and pinion direct from the main axle. These arms have peculiar formed heavy wire ends that it is claimed entirely separate the earth from the potatoes without bruising the latter in the slightest. The weight is given as 700 pounds, and it is sold complete with pole, neck yoke, whiffletrees, and all necessary wrenches at \$84; 2 per cent off, 14 days, or 3 months acceptance net.

AMERICAN PLOWS NOT POPULAR.

American plows have never made any headway in Germany, and I have been unable to discover that any determined effort has been made to introduce them. Rudolph Saks Works, at Plagawitz, near Leipzig, claims to be the largest plow factory in the world, and they certainly do a very large business all over the Continent. Next to Saks the establishment mentioned earlier in this report also turns out very great numbers of plows and are especially aggressive in the Russian trade. The average plow from either of these works is a crude affair, at least as regards looks, compared to American cheap plows. Riding and disk plows are almost unheard of. It is greatly to be regretted that our manufacturers do not improve the opportunities offered to visit such shows as that of the German Agricultural

Society and see what the managers of their European departments have to meet in the way of competition. I am quite confident that two or three days spent in the Stuttgart show yard would have been a great educator to even our most experienced men.

AGRICULTURAL MACHINERY FOR RUSSIA.

COMPETITIVE TESTS ANNOUNCED BY THE ST. PETERSBURG GOVERNMENT.

The Department of State is in receipt of a note from the Russian Embassy, dated July 14, conveying the following information concerning international competitions to be organized shortly by the general department of agricultural organization and agriculture of Russia:

The general department for agricultural organization and agriculture of Russia will organize next month.

An international competition (trials) of apparatus and implements for the pulling out of stumps and the clearing of tracts of ground covered with forest. It will take place in the vicinity of the city of Tara, in Siberia. Information desired on the subject can be obtained from the Bureau of Agricultural Mechanics at St. Petersburg, Moika No. 87.

An international competition in spraying machines, organized in common with the imperial horticultural society. This will be held at Simferopol, Crimea.

Saigon Rice Report.

Consul Jacob E. Conner, reporting from Saigon on the Cochinchina rice trade, says that prices again declined, the week ending June 1 closing as follows:

Paddy, per picul of 150 pounds, delivered at the mills, \$1.22; cargo rice, per picul of 134 pounds, 5 per cent broken, \$1.59, 20 per cent broken, \$1.49; white rice for shipment to Hongkong, \$2.16, to Manila, \$1.80, to Japan, \$1.78, and to Europe, \$1.78.

In a previous report, covering the two weeks ended March 16, Consul Conner advised that the demand had fallen off considerably, resulting in a withholding of the supply of paddy, and this in turn resulted in a slight advance in prices of hulled rice. The native farmers by a very general agreement were holding their product for an advance in prices. The Saigon "dollar" had declined in value and was worth only 46 cents.

Fifth Public Quinine Sale at Batavia.

Consul B. S. Rairden, of Batavia, reports the fifth public sale of quinine for the year 1908, held at that Java city on June 17, with the following results:

There was put up for sale 4,458.48 kilos (about 9,809 pounds) sulphate of quinine, packed in lots of 22.68 kilos, or about 50 pounds. Of this amount there was sold 138 lots at 11.09 florins (\$4.458) per kilo (2.2 pounds), or a unit price of 0.033 florins (\$0.0132).

MEXICAN SUGAR GROWING.

EXCELLENT NATURAL CONDITIONS ARE AIDED BY CHEAP LABOR.

Consul P. Merrill Griffith, of Tampico, submits the following report on land values in Mexico, and the cost of planting, cultivating, and harvesting the cane crop:

One of the leading industries of Mexico, and one that has advanced most rapidly during the last five years, through the introduction of improved agricultural and milling machinery and the adoption of more scientific methods in the cultivation of the cane, is the production of sugar.

There is an excellent demand in Mexico for all sugar produced, and all grades find a ready sale at good prices. A few years ago the demand among the Mexicans of the middle and lower classes was for brown sugar exclusively: now they demand also granulated or white sugar manufactured into pilons.

The amount of sugar produced depends upon the character of the soil and the location of the land. In this section the yield averages from 25 to 40 tons of cane to the acre. The saccharine matter from this quantity of cane amounts to about 65 per cent of the weight, and the quantity of white centrifugal sugar produced from $7\frac{1}{2}$ to 10 per cent, or from 130 to 150 pounds of sugar to the ton.

The cane raised in this section of Mexico, in comparison with that raised in most sections of the United States, has a higher baumé, usually running from 9 to 15, and the sucrose contents in proportion. The stalks grow from 13 to 15 feet high, have from 32 to 36 joints, and often measure from 7 to 8 inches in circumference at the bottom. It has been stated by persons of practical experience that sugar can be produced here for less than 1 cent gold per pound, which enables it to compete successfully in almost any market of the world.

The following table, in kilos of 2.2 pounds, shows the production of sugar and molasses of the different States of Mexico during the year 1907. [For the purpose of comparison the corresponding figures for 1906 have been included.—B. of M.] :

	Molasses.		Sugar.	
	1907.	1906.	1907.	1906.
	Kilos.	Kilos.	Kilos.	Kilos.
Campeche.....	858,125	654,000	1,445,549	542,000
Chiapas.....	683,700	622,000	732,300	372,000
Colima.....	775,000	1,330,000	1,597,243	1,740,000
Guerrero.....	2,951,400	2,652,000	2,889,450	2,096,000
Jalisco.....	6,388,000	6,448,000	6,304,300	6,196,000
Mexico.....	673,816	747,000	189,863	158,000
Michoacan.....	5,064,039	13,675,000	7,492,809	6,650,000
Morelos.....	18,578,684	21,257,000	42,229,727	35,662,000
Nuevo Leon.....	300,000	350,000	924,000	914,000
Oaxaca.....	2,273,911	2,134,000	1,682,320	1,417,000
Puebla.....	6,157,000	6,037,000	16,739,000	6,549,000
San Luis Potosi.....	3,769,320	3,594,000	1,268,000	1,925,000
Sinaloa.....	3,900,000	3,860,000	8,785,000	8,540,000
Tabasco.....	1,129,000	1,065,000	2,005,000	1,967,000
Tamaulipas.....	1,538,500	1,529,000	1,578,000	1,694,000
Tepec.....	1,125,000	2,000,000	3,250,000	2,500,000
Veracruz.....	9,688,824	9,312,000	18,690,000	16,297,000
Yucatan.....	2,484,500	2,130,000	1,694,000	1,241,000
Total.....	68,328,819	79,396,000	119,496,561	96,460,000

STRAITS SETTLEMENTS EXPORTS.

EAST INDIA PRODUCTS EXPORTED TO AMERICA AND EUROPE.

Vice-Consul-General George E. Chamberlin, of Singapore, furnishes the following tabulated statement showing the exports of East Indian products from the Straits Settlements (Singapore and Penang) during the month of April, 1908: .

Articles.	United States.	United Kingdom.	France.	Germany.	Other European countries.	Total.
	Pounds.	Pounds.	Pounds.	Pounds.	Pounds.	Pounds.
Coffee.....	94,133				19,066	113,199
Copra.....		785,066	4,765,866	409,866	3,703,798	9,769,596
Gambier.....	1,517,199	1,292,666	252,133	617,733	923,066	4,602,797
Gambier cube.....	365,333	44,810	27,866			506,199
Gums:						
Benjamin.....	10,400				15,466	25,866
Copal.....	995,333	696,533	505,066	253,866	402,932	2,855,730
Kammar.....	22,400		5,600		4,000	32,000
Gutta-percha.....	22,800	59,600		282,980		365,330
Jelotong.....	1,255,199	302,533	16,800	137,333		1,711,865
Hides.....	26,533	330,733	33,866	7,333	20,924	419,399
Mace.....	10,532	2,933			1,066	14,531
Nutmegs.....	89,999	19,333				109,332
Pepper:						
Black.....	1,818,866	37,080	630,000	763,600	600,064	3,849,610
White.....	554,533	290,933	85,066	112,400	98,799	1,141,731
Poonac.....				112,133	560,500	672,633
Rubber:						
Borneo.....	90,266	22,000	40,200	17,866	35,066	217,264
India.....		12,400				12,400
Para.....		179,200			21,466	200,666
Rattans.....	1,241,866	509,066	374,800	1,982,133	160,133	4,267,998
Sago:						
Flour.....	1,631,466	2,811,200	112,133	22,533	1,134,133	7,962,498
Pearl.....	162,433	381,466	22,533	108,933	90,132	755,497
Tapioca:						
Flake.....	10,866	1,377,200	202,666	45,066	11,200	1,646,998
Flour.....		241,266			28,266	269,532
Pearl.....	2,066,532	932,933	86,666	196,133	168,532	3,450,796
Tin.....	1,750,933	3,923,066	986,266		407,866	7,068,131
Pineapples (cases).....	6,044	25,844	1,504	675	1,460	35,647

Of the shipments of black and white pepper, the bulk of it went to the following ports: New York, Boston, and San Francisco; Vancouver and Winnipeg; London, Liverpool, and Glasgow; Havre, Marseille, and Dunkirk; Hamburg and Bremen; Odessa; Antwerp; Amsterdam and Rotterdam; Copenhagen.

Many of the shipments to the United Kingdom and other European countries are optional, therefore it is difficult to tell their ultimate destination.

American Exploitation of Colombian Petroleum Fields.

Consul Isaac A. Manning, of Cartagena, reports that three Americans from Beaumont, Tex., have entered into an agreement with the Colombian firm which held the concession for the exploitation of the oil fields of Cartagena and the refining of petroleum. The rights cover various tracts of oil-bearing lands amounting to 12,000 acres, partly near Turbaco, 15 miles from Cartagena, and partly in the valley of the Sinu River. Excellent prospects have been found in both places, and the Americans have returned to Beaumont to complete arrangements to begin work. They will bring modern machinery and sink a number of wells to demonstrate the character of the deposits, and if successful in finding oil in paying quantities will proceed to develop their properties and to place the product on the market.

CHILEAN TRADE NOTES.

Consul Alfred A. Winslow, of Valparaiso, forwards the following notes relating to commercial and industrial interests of Chile:

Fire insurance rates have more than doubled in Valparaiso since the great earthquake of 1906, and this with a strong antiearthquake clause in each policy.

The Argentine Government has sent a commission to Chile to study the agricultural and economical conditions with a view of adopting those best suited for that country.

During the first three months of 1908 the exports of Chile amounted to \$31,355,380.22, which shows a gain of about 20 per cent over the same period last year. Of the increase, wheat formed an important part.

During the first three months of 1908 the Asociación de Señoras contra la Tuberculosis of Santiago assisted 4,956 persons afflicted by tuberculosis. The results were very satisfactory, especially among the children and younger adults.

The soundings made under the direction of the director-general of mines of Chile in the vicinity of Valdivia demonstrate the fact that there are extensive deposits of coal in that locality, varying from 24 to 526 feet below the surface. The coal is said to be of fair quality.

The Government of Chile has just let the contract to a French firm of Creusot for the sum of \$339,500 United States gold, for the construction of three steel railroad bridges. One is over the Maule River, in the province of Constitución, and the others are in the province of Cautin, one being over the Chol-Chol River and the other over the river Ranquillo.

The Empresa de Tracción y Alumbrado Electricos, of Santiago, is installing a 22,000-horsepower hydraulic electric power plant at La Florida, whence the current is to be transmitted to the city over an underground cable at a tension of 12,000 volts. This will be sufficient to light and supply power for the works of the city for many years to come. The installation is principally German.

Foreign Directories Furnished by American Consuls.

A comprehensive series of commercial directories covering Colombia have been compiled by the American consular officers in that country, and forwarded by Consul-General Jay White, of Bogota. Consul John W. O'Hara sends a compiled list of the principal importers and general dealers in the Brazilian cities of Sao Paulo, Santos, Rio Grande do Sul, Palotas, and Porto Alegre. Printed directories are supplied of Belgium by Consul-General Ethelbert Watts; of Warsaw, Russia, by Consul Hernando de Soto; of Chile by Consul Alfred A. Winslow; of Valencia, Spain, by Consul Charles S. Winans; of Colon and Cristobal, Panama, by Consul James C. Kellogg; of Paraguay by Consul Edward J. Norton; of Dublin, Ireland, by Consul Alfred K. Moe; of Newcastle, England, by Consul Horace W. Metcalf; and a telephone directory of Durango, Mexico, by Consul Charles M. Freeman.

All the foregoing directories may be consulted at the Bureau of Manufactures.

JAPANESE NOTES.

Consul Hunter Sharp sends from Kobe the following Japanese newspaper information relating to commerce and industry:

The customs revenues at all open Japanese ports in 1907 amounted to \$23,972,000, against \$21,074,000 in 1906, \$17,590,000 in 1905, and \$7,561,000 in 1901.

The population of Kobe has increased from 190,000 in 1898 to 360,000 in 1908. The city's foreign trade now amounts to \$165,000,000 gold per annum, or double that of ten years ago. The total tonnage entering and clearing at Kobe last year amounted to 31,414,000.

The match industry in Japan appears to have suffered most of all from the depression of trade with China consequent upon the decline of silver and the monetary stringency, and the industry is now reduced to a most trying and critical situation. Many factories have stopped, and the Kobe and Osaka manufacturers have proposed to suspend work altogether.

The new steel pier of the Tokyo Warehouse Company in connection with warehouses at Wada Point, Kobe, were opened on May 24. Six railway tracks, stationary and portable cranes, etc., furnish landing facilities for 1,200 tons per day. The company has four warehouse compounds with a ground space of 145,200 square yards, in which there are now \$10,000,000 worth of goods.

There are no cities of any note in the Empire that do not possess a system of electric tram cars, omnibuses, or motor cars, and almost every important place or pleasure resort in the country is connected with the main cities by one of the means of locomotion mentioned, so that the capital invested in such undertakings has reached an enormous amount. There are eight tramway lines running, with an aggregate capital of \$18,530,000 gold. Adding smaller companies and several enterprises not yet opened, the aggregate capital of all the lines—those in operation or about to be operated—reaches a grand total of over \$50,000,000, with a mileage of 545.

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DEVELOPING MOTOR TRADE.

FRANCE.

AN EXHAUSTIVE TEST OF INDUSTRIAL MOTOR VEHICLES.

Consul-General Frank H. Mason, of Paris, gives the following account of the recent competitive test of commercial and industrial motor vehicles, which he says was the most important ever made in France, and marks definitely the present trend of manufacture and technical progress:

During May there was held in France a competitive test of industrial motor vehicles, which, in its organization, purpose, and consummate management, furnishes an interesting and instructive example of the manner in which the leading French industries are fostered and encouraged by intelligent organization, with the recognition and support of the National Government.

The competition was organized by a commission of the Automobile Club de France, with the cooperation and support of the ministry of war, which sent a board of military experts to make the tour and gave a special prize of 8,000 francs (\$1,544) for the best "camion" or transport wagon for military purposes.

It was the announced purpose of the competition to give to commercial and industrial motor vehicles of all classes the most exhaustive test which they have yet had to face in this country, and the regulations were not only strict and exacting to the utmost degree, but were enforced with unflinching impartiality and severity.

The competing vehicles were divided into nine classes, of which the first seven comprised cars of various types for the transportation of merchandise, and the last two, motor omnibuses and touring cars capable of carrying from 6 to 10 or more passengers, besides the chauffeur and conductor.

CLASSIFICATION OF ENTRIES.

The designations of the classes 1 to 8 were for vehicles carrying, respectively, from 100 to 410 pounds of merchandise; from 410 to 1,820 pounds; 1,820 to 3,150; 3,150 to 4,200; 4,200 to 6,300, and for more than 6,300 pounds. Class 7 included trains of freight wagons hauled by road locomotives. Class 8 was for omnibuses and touring

cars carrying 6 to 10 passengers, and class 9 comprised those capable of carrying more than 10 passengers.

The dead weight for the freight wagons was supplied in the form of boxes of sand, each weighing 110 pounds, put up and sealed by the commission of the Automobile Club. The entries numbered about 80, and covered every size and type of vehicle contemplated by the schedule.

Nearly all the leading manufacturers who have built up the French automobile industry to its present position competed, most of them with new vehicles designed or improved from previous types, since the overstocked and changing market of 1907 showed that the future of the automobile industry must lie more and more in the direction of commercial and industrial vehicles.

All being ready, the official weighing of the competing vehicles was accomplished on May 1 and 2. The third was devoted to a public exhibition of the whole equipment, and on the fourth the long procession of vehicles—each laden according to its class and carrying a commissioner-expert from the Automobile Club to supervise and control every detail—started on a prearranged tour which occupied twenty-seven days and covered a distance of about 3,500 kilometers, or approximately 2,175 miles.

GENERAL CHARACTER OF THE ROUTE AND COMPETITION.

The first day's run was from Paris to Rouen, from which point excursions were made on the 5th and 6th to Havre and Pont Aude-mer, respectively, returning each night to Rouen, where a public exhibition of the competing machines was held on May 7.

It was a fundamental condition of the competition that every vehicle should arrive at the designated point at the close of each day's journey, and be parked together in a guarded inclosure, where unauthorized repairs or the taking of additional supplies of oil, gasoline, and other materials would be impossible without detection.

On the 8th the journey was resumed and the competitors arrived in the evening at Amiens, where another series of excursions took place, and the train then proceeded to Lille, where, after three excursions, each occupying a day, an exhibition of the vehicles was held on May 13. The route then led to Rheims, from which place three daily excursions were made, and an exhibition held on the 18th; thence to Verdun, Pont-à-Mousson, and Nancy, where the same programme of excursions and exhibition was repeated. Thence the competing vehicles set out for Dijon, where the programme of three daily excursions over prescribed routes was again repeated; thence to Auxerre, and finally, on May 31, the long procession of dusty and travel-stained cars made the last stage of its journey from Fontainebleau and came rumbling into Paris, and were parked in the great machinery hall on the Champs de Mars, where they were kept under strict guard to await the examination of the awarding committees.

The daily runs had averaged about 150 kilometers (or 93.36 miles) for freight vehicles comprised in the first seven classes and 200 kilometers (or 124.48 miles) per day for omnibuses and touring cars of classes 8 and 9, to which had been assigned in each day's itinerary a separate and longer route between the points of starting and destination. The rate of speed was fixed from 10 to 12 kilometers per

hour, and if any vehicle exceeded that pace and reached an intermediate point too soon, it was halted by the accompanying commissioner and held until the hour and minute when it should have passed that point if traveling at the prescribed speed.

SOME OF THE RESULTS.

A full discussion of the results obtained and the teachings derived from this exhaustive test would lead into technicalities, as well as personalities, which are outside the scope of a consular report. The principal facts may, however, be summarized as follows: Sixty per cent of all the vehicles entered for the competition made the entire tour and returned in good working condition. This was a marked improvement over the result attained by a similar test in 1907. The standard of economic efficiency, in the relation of fuel consumption to speed and ton-kilometers, was higher on part of several vehicles than had ever before been achieved in this country. The total general average consumption of gasoline per ton-kilometer in 1907 was 0.091 liter (liquid liter=1.05 quarts), whereas this year the average was reduced by improved methods and motors to 0.043 liter.

Especially interesting in this connection was the record of nine fiacres, or motor cabs, built by several of the leading automobile makers of France, and which used as fuel alcohol, carbureted with a 50 per cent admixture of benzine. This mixture costs in France 33.7 francs per hectoliter, or \$6.50 per 26.418 gallons—a little more than 24.6 cents per gallon. The cabs weighed from 1,592 to 1,722 kilos (3,510 to 3,796 pounds), and made during the tour a special test run of 112 kilometers (69.6 miles) in three hours and forty-four minutes, with a total consumption ranging from six liters costing 2 francs (or 38.6 cents) to 16 liters, costing \$1.06 for the entire distance.

It is thus demonstrated that in France, at least, alcohol has a definite future as a fuel for commercial and industrial motor vehicles.

The principal prize offered by the minister of war was won by a covered wagon built by De Dion Bouton, which carried 8,514 pounds of dead weight, weighed complete, with crew on board, 14,372 pounds, and showed during a special test of 112 kilometers a fuel consumption of 0.0677 liters per ton-kilometer.

NATAL.

RAPIDLY INCREASING USE OF MOTOR WATER CRAFT.

Consul Edwin S. Cunningham, of Durban, advises that the conditions in Natal in regard to the motor trade have not materially changed since his report of last year, to which he adds:

The twelve months have justified the prediction that a considerable number of petroleum motors would be sold for use principally in pleasure boats, though the number installed locally and on interior lakes has been larger than was expected. On one small lake far up country four American motors have been installed in ferryboats, while as many more pleasure boats have been similarly equipped. In pleasure boats on the bay at Durban have been installed two (different makes) American, 7-horsepower, double cylinder engines

during the past year. A similar boat has been equipped with a well-known English motor.

PROMISING SALES OUTLOOK.

The year has been one of activity in the motor engine trade, and, while the field is not an extensive one, it is certain that during the next twelve months a greater number will find sale than during any corresponding period previously.

The bay at Durban is large, well protected, and most picturesquely beautiful, affording at high tide as charming a course as can be desired for the pleasure motor boat; races over 10-mile courses are weekly occurrences, and the protection given by the breakwater enables angling to be carried on even to the mouth of the bay without danger.

There are some 12 ferry motor boats in the harbor, two deep-sea fishing boats equipped with petroleum motors, and an already very large number of pleasure boats. The pleasure boat offers by far the best field for new sales, and an increasing number of small engines of this class can be sold both at Durban and for use up country.

COMPETITION AND MISTAKES.

The trade at present is largely American, about 75 per cent of the engines being of American makes. The most active demand is for American engines, chiefly Palmer & Ferro, though an English make has been making a strong effort to control the trade and to advertise their motor a first-class pleasure boat has been built for use on the bay, the manufacturers having made liberal allowances to the owners. It is apparent that such a scheme will do more to get a motor favorably before the public than any other manner of advertising.

Several engines have been ordered by intending users direct from the manufacturers, and the experience of at least one has not been such as to encourage repetition. An official of the Durban Corporation ordered a 4-horsepower engine which he saw advertised from a Detroit maker on December 15, 1906, remitting at the same time \$72 in full payment. The order was promptly acknowledged, with promise to ship not later than end of February. Under various excuses it was not shipped for several months, and it was only received in Durban at the end of October, 1907. This is an extreme case and not of a well-known make, but complaint of considerable delay is made against other manufacturers. An order for a boat and engine by another person was equally unsatisfactory, a great delay in shipping was followed by insufficient packing, resulting in considerable damage to the boat. [Dealers in and small builders of motor boats at Durban are listed at the Bureau of Manufactures.]

BRAZIL.

AUTOMOBILE AND MOTOR-BOAT TRADE IN SANTOS REGION.

Consul John W. O'Hara, writing from Santos, gives the following information on the trade prospects for motors in southern Brazil:

The market in this part of Brazil is very limited for the sale of automobiles, owing to the condition of the public highways. Santos

has but one automobile, and its use is necessarily confined to the city proper, as there are no roads leading into the interior upon which an automobile could be operated with safety. The streets of the city of Sao Paulo and the roads in the immediate vicinity are in good condition and many machines are in use, but on the country roads they can not be used with safety, comfort, or convenience. Still, there is some demand, and American machines are popular as long as they can be kept in repair. The chief trouble is to get the necessary parts and repairs when needed. It is very difficult to obtain any definite statistics, as automobiles, motor boats, etc., are all included under the same classification.

GOOD OPENING FOR MOTOR BOATS.

There is a good market for motor boats in this city and along the whole south coast of Brazil, if the American manufacturers will give it their proper attention. There are 21 such boats now in use in this port, and nearly all are of American manufacture. But if the reports of the purchasers be true, the manufacturer has taken no pains to extend or even to hold the trade in this market. In the first place a boat will be sent to a purchaser who has paid his money through an export agency before the boat has been shipped from New York, and then the manufacturer gives the matter no further consideration. He does not even take the precaution to send full instructions as to how the parts should be adjusted or the boat operated. He does not seem to appreciate the benefit to be derived in advertising, by the successful operation of a new boat, or care for the results of a failure.

The local agent usually knows nothing about the construction or operation of a motor, and the purchaser must employ a local machinist, if he can find one, who demands a fee that is discouraging to the owner, or perhaps condemns the motor because it is unfamiliar to him. It is a difficult matter to secure the services of a competent machinist here.

I have spoken with a gentleman of experience in this city in relation to the sale and use of motor boats in this market, and he says that he has already purchased 5 boats of different styles and sizes from American makers, and he has invariably had trouble with them; first, because proper diagrams and instructions did not accompany the boat; second, because he could not purchase supplies in this country when he wanted them; and third, because the freight rates from New York were about double the rates from Europe. He said that he paid 1,200 milreis, or \$360, freight from New York to Santos on a 26-foot launch recently purchased, and that by reason of the high freight rates he was compelled to pay more customs duties, as the duty is calculated at 7 per cent of the cost and charges. But he says that the American motor boat is so much superior in construction to any other that he still patronizes American makers.

MARKET IN OTHER COAST CITIES.

Of course the needs of this market are limited by the size of the city, but with proper attention I think that a great many motor boats may be sold and the market be extended to the coast cities south of Santos, Rio Grande do Sul, Porto Alegre, Pelotas, Sao Francisco, Joinville, Paranaqua, and Antonina. There are at least 100 miles of

smooth available rivers in the vicinity of Santos, and at Rio Grande do Sul is the Lago dos Patos, 60 by 30 miles in extent. The most popular boats are those ranging in length from 16 to 21 feet.

The only way to secure this market and to hold it is to establish a central agency with an American manager and mechanics who understand how to adjust, operate, and repair a motor boat. This establishment should carry a line of supplies, and they should be sold to customers at the most reasonable prices possible. It should be made a rule that every boat coming to this market is properly adjusted, explained, and started. An arrangement might be made with some hardware or implement dealer for space for supplies and repairs, and thus save expense. As to the freight rates, if they are, as reported, so much higher from New York than from European ports, this matter could and should be adjusted by the manufacturers and not left to their export agents. [The names of dealers at Sao Paulo and Santos who might be interested and to whom catalogues might be sent may be obtained from the Bureau of Manufactures.]

CHINA.

MOTOR BOATS AND AUTOMOBILES IN FOOCHOW.

Consul Samuel L. Gracey furnishes the following information concerning the use of motor boats at Foochow:

There are only three motor boats plying on the Min River, on which the city of Foochow is located, and on which there is great native travel and commerce. There are several steam launches, most of which are owned by foreign firms, which also own the motor boats.

Automobiles are not known in this part of China, simply because there are no streets or roads on which they could be used. The streets are the usual width of Chinese city streets—from 6 feet to 15 feet—and even this is encroached upon by outside stands and show cases and display of goods, and the country roads are mere footpaths of about 4 feet in width, and in many places long flights of steep steps are the only means of rising to the higher altitudes along the mountain side over which the road passes. Such roads are entirely impracticable for any vehicle. [A list of persons or firms at Foochow interested in motor boats is filed at the Bureau of Manufactures.]

Petroleum for European Locomotives.

Consul-General Norman Hutchinson, of Bucharest, reports that several high officials of the Austrian railways have arrived in Roumania for the purpose of studying the question of petroleum as a railway locomotive combustible. The consul-general adds:

If it is found that the use of petroleum as a locomotive combustible is working satisfactorily upon the Roumanian railways, it is intended to introduce the use of petroleum upon the Austrian railways.

It appears to the writer that petroleum seems to answer the purposes for the making of sufficient steam, and does away with coal dust and cinders; on the other hand, the odor of the smoke issuing from the locomotive is offensive to many persons, while others consider it more or less healthy.

AUSTRIAN EXPORT ASSOCIATION.

ACTIVE EFFORTS OF SEVERAL PROVINCES TO EXTEND FOREIGN TRADE.

Consul Joseph I. Brittain, writing from Prague, states that the Export Association of Bohemia, Moravia, and Silesia has been formed for extending their manufactured products into foreign countries, their activity being thus described:

The society has permanent offices at Prague, where there is constantly on duty a staff of paid officials. One department attends to the department of commerce, another to the collection of debts, another has charge of the tariff, and customs-house affairs, another the matter of transportation and brokerage.

The association consists of upward of 1,200 members from the various industries in Bohemia, Moravia, and Silesia. These members are assessed annually according to the volume of business transacted, the minimum assessment being 20 crowns (\$4.06) and the maximum 50 crowns (\$10.15). Aside from these assessments the society is subsidized by the Government, else it could not meet its expenses. Special representatives from the association are sent to various parts of the world when there appears to be an opportunity for extending the trade of any one of the three interested countries. During the month of August this year the president of the association will make a tour of the leading commercial centers of the United States, with the hope of materially increasing the exports to America.

Aside from tours made by special representatives of the association, there were received last year 52,671 and forwarded 83,522 commercial communications. When an inexperienced merchant or manufacturer receives an order for merchandise from a foreign country, he may, upon the payment of a small fee, receive from the association full instructions as to tariff, packing, brokerage, freight, time in transit, and terms of sale in the country where his merchandise has been sold.

GOVERNMENT SHOWS INTEREST.

The association in June held a congress on the Prague exposition grounds, which was attended by exporters and manufacturers, and also by the various consuls in Prague. The leading address was delivered by Karl Duschnitz, imperial councilor. The speaker took the position that only nations with highly developed industries can hope to compete for a share of the world's commerce. He said that countries where agriculture predominated could not attain much commercial prominence.

Especial attention was called to the increased exports from Germany and the decrease in emigration from that country within the past twenty-five years. Its exports have increased 220 per cent while those of Austria-Hungary have increased but 70 per cent. Germany's annual emigration during the same period has decreased from 210,547 to 31,000, while the emigration from Austria-Hungary has increased from 74,000 in 1890 to 262,833 in 1906. By extending the commerce of Austria-Hungary, the speaker claimed that the Austrian laborer would receive higher wages, and therefore be better contented to remain at home.

The Prague Chamber of Commerce has also an export department, which assists the exporter in every possible way. Through subsidiz-

ing these commercial organizations, the Government aids foreign commerce. The large foreign population in the United States acts as a great advance army for the purchase of merchandise from the mother country. There are comparatively few Americans in foreign countries, hence our wares must sell on their merits, if at all.

FOREIGN TRADE OPPORTUNITIES.

[Inquiries in which addresses are omitted are on file at Bureau of Manufactures. In applying for addresses, refer to file number.]

Consuls are requested to contribute to this department.

- No. 2519. Floor tiles.**—An American consular officer in Latin America reports that he has received an inquiry in regard to samples and quotations on 2,500 square feet of floor tiles. Attention is called to the fact that, on account of the high rates for transportation, quotations on light-weight tiles only are desired.
- No. 2520. Improvements in motor omnibus equipment.**—A motor omnibus company in Europe is reported by an American consular officer to be in the market for any improvement in equipment that would decrease the cost of operation or that would increase the efficiency of their motor omnibuses.
- No. 2521. Machines for weaving tape or webbing.**—The Bureau of Manufactures is in receipt of a letter in which the names of manufacturers of machinery for weaving tape or webbing 2½ or 3 inches wide are asked for.
- No. 2522. Hay, pea beans, and cement.**—An American consular officer in the West Indies reports that a commission house there desires to represent some American business firms exporting hay, pea beans, and cement. The members of this firm claim that they are in a position to handle a large amount of the products named if proper agreements can be made.
- No. 2523. Cotton-seed oil.**—One of the American consuls in the Orient is informed by the agent of an American company there that he finds good prospects of developing a market for American cotton-seed oil, and that he will be glad to receive samples, price lists, and advertising literature which he can use in creating a demand for this oil. Communications may be addressed to the New York City office of his company, if it is desired, or directly to him.
- No. 2524. Electric cranes.**—Consul W. Stanley Hollis, of Lourenço Marquez, S. E. Africa, reports that tenders to supply electric cranes for the Gorjao wharf at that port can be submitted for some months to come before the final adjudication is made. The consul states that he has forwarded a set of specifications, and upon their receipt by the Bureau of Manufactures they will be loaned to applicants.
- No. 2525. American copper.**—An American consul in the United Kingdom has been addressed by a business agent there who desires to know if there are any new copper mines recently opened in the United States which are not represented in the United Kingdom, and which are in a position to supply either the ore or copper to users there. The inquirer desires to act as agent in this capacity.
- No. 2526. Fruit-drying machinery.**—An European business firm representing an extensive group of fruit growers is reported by an American consular officer to be contemplating the establishment of a factory for drying fruit, especially plums, with a minimum capacity of about 40,000 pounds a day. This firm desires estimates on such an equipment from American manufacturers.
- No. 2527. Cotton garments for artisans.**—An inquiry as to cotton garments made in America and suitable for artisans has been received by one of the American consular officers in Europe.
- No. 2528. Mining machinery.**—One of the American consular officers in the Orient calls attention to the favorable opportunity now presented there for selling extensive quantities of American mining machinery with which to equip the mines. In addition to the names of the representatives with whom correspondence should be held (which are given by him), he suggests that American manufacturers of mining machinery send representatives into the territory in question.

FOREIGN RAILWAY PROGRESS.

CHINA.

AMERICAN SUPPLIES FOR THE FUHKIEN LINE.

The following information concerning the building of the Fuhkien Railway, and the American supplies therefor, is furnished by Vice-Consul E. Carleton Baker, of Amoy:

The Fuhkien Railway, which is ultimately to connect this province (Fuhkien) with the Province of Kwang Tung, on the south, and Kiang Si, on the west, is now well under way. The route from Amoy to Chang Chew, a distance of 33 miles, has been surveyed and the right of way secured, and the tracks have already been laid for a distance of 3 or 4 miles. A large construction force is now working on the road and the work is steadily progressing. The terminus near Amoy is situated on the mainland at Sung Su, 2 or 3 miles distant from Amoy city proper. It adjoins the water front, and large ships may come alongside as soon the the piers are built. A railway depot and car shops have already been completed, are very substantially built of brick, and present quite an imposing appearance.

The rails for the road were all ordered from the Hanyang Iron Works in the Province of Hu-Peh, \$45,000 worth having been delivered, while \$75,000 worth are on the way. The contract price was about \$35 per ton. The ties, or sleepers, are all of Japanese manufacture, some 50,000 of them having been delivered and paid for at the rate of about 53 cents apiece.

SUPPLIES FROM THE UNITED STATES.

The bridges for this road have all been ordered from the United States through a firm in Shanghai, which works conjointly with an American firm with headquarters in New York. Considerable American rolling stock has also been ordered through this firm, also American couplers, turntables, and other general supplies.

Only two locomotives so far have been ordered. One is of American and the other of German manufacture. Both are now here on the field. The German locomotive has just been set up by a local engineer, and the American engine is being put together by a personal representative of the American locomotive company which manufactured it. The two locomotives are of similar type and each cost about \$9,000. Additional locomotives will doubtless be ordered according to whichever of the two locomotives proves the more satisfactory. It may be said that the necessity of having a personal representative of technical training on the field can be seen nowhere more clearly than here. The American locomotive will be shown and handled to far better advantage by the American in charge than the German product can be by some person who is not actually connected with the locomotive business.

Some of the leading officials of the road seem to be favorably disposed toward American rolling stock and railway supplies of all kinds, at least to the extent of giving American manufacturers a fair chance to prove the efficiency of their products, and thus enable the road to purchase them with profit, which is all that can be expected.

There is, therefore, every opportunity for the sale of American railway supplies to the Fuhkien Railway, and a proper representation

should accomplish profitable and far-reaching results, for more and more material will be required as the railway extends its field of operations, which will eventually cover the greater part of this Province.

LOCAL REPRESENTATION.

Little can be accomplished, for various inexplicable reasons, without personal representation. Therefore the man who is on the ground has by far the greater advantage. Where American firms can not have American agents to represent them directly, it is better to be represented upon the ground by some foreign firm handling American goods than to merely send out catalogues and letters, which seldom accomplish the desired results. The American locomotive now here was sold through a Japanese concern, while the other American goods, as stated, were sold by a firm in Shanghai. As there is no American firm handling railway supplies in this Province, it might be well for American houses to correspond with this firm at Shanghai if they desire to sell supplies for the Fuhkien Railway and can not be represented directly by an American agent, for this firm is in close touch with the railway officials and has furnished the greater part of the supplies thus far ordered. [Address of the Shanghai firm is on file in the Bureau of Manufactures.]

SHANGHAI-NANKING RAILWAY.

Consul-General Charles Denby, of Shanghai, sends a printed report prepared by the engineer in chief of the road, on the completion of the Shanghai-Nanking Railway, which gives a complete account of the agreement for its construction, the cost thereof, the engineering work connected therewith, the material, equipment, etc. [The report may be consulted at the Bureau of Manufactures.]

JAPAN.

GREAT PROGRESS IN RAILWAY BUILDING.

The following report concerning the progress of railway building in Formosa under the Japanese is furnished by Consul Julian H. Arnold, of Tamsui:

When the Japanese took possession of Formosa in 1895 there were only 62 miles of railways, extending from Kelung to Shinchiku, and this road was poorly constructed. In 1896 the Formosa Railway Company was organized with a capital of 15,000,000 yen (\$7,470,000), and plans for the construction of a trunk line, extending from Kelung, in the north, to Takao, in the south, drawn. Owing to a scarcity of money in Japan the stock was not sufficiently subscribed for, and in 1887 the company was forced into liquidation.

FORMOSAN GOVERNMENT RAILWAYS.

In 1899 the Japanese Diet sanctioned the issuance of Formosan government bonds to the extent of \$14,342,400 for constructing the road. The entire management, control, and operation of the railway passed into the hands of the Formosan government. Construction work was vigorously pushed, and by 1905 the line was finished from Kelung to Hakoko in the north, and from Takao to Koroton in the south. The 14½-mile section from Hakoko to Koroton, owing to dif-

ficult engineering work, required three years longer for completion. This section when completed cost \$174,300 per mile. The entire road extending from Kelung, the northern port, 247 miles to Takao, the southern port, was opened to traffic on April 20, 1908.

Between Byoritsu and Taichu the road reaches its highest altitude, 1,200 feet. The building of this section necessitated the construction of 18 tunnels, of a total length of over 4 miles, and 28 steel bridges, of a total length of over 6 miles. The greater part of the bridge girders were purchased in the United States. The road is 42-inch gage with 60-pound rails. In addition to this main line there are two branch roads, one from Taipoe, the capital city, 13 miles to Tamsui, the port of China trade, and the other from Takao, the southern port, 10.6 miles, to Hozan. The total rolling stock consists of 39 locomotives, 595 freight cars, and 99 passenger coaches. The department maintains repair and construction shops in the capital city, where 190 Japanese laborers and 372 Chinese laborers are employed.

Up to March 31, 1908, \$12,492,352 had been spent on construction work.

During the two years 1908 and 1909 there will be spent an additional sum of \$1,245,000 on the construction of railway stations and the improvement of the lines. Thus at the end of the fiscal year 1909 there will have been spent a total sum of \$13,737,352 on railways, this being \$605,047 less than the estimates made at the time of the floating of the loan.

Up to the year 1906 the receipts did not cover running expenses; since then receipts have covered running expenses plus interest on bonds. It is expected that the gross receipts for the fiscal year 1908 will be more than \$1,500,000, in the event of which there will be netted a good profit.

SUGAR ESTATE TRAMS AND PROPOSED NEW RAILWAYS.

During the fiscal years 1909-1916 there will be expended \$2,119,986 in the construction of a railway for about 100 miles along the east coast. There are being constructed by the sugar mills in South Formosa about 350 miles of sugar-cane trams. In addition to transporting sugar cane from the plantations to the mills these trams are privileged to haul freight and passengers. The cars are all drawn by steam locomotives.

To tap the virgin forests of the Arisan district a lumber company began several years ago the construction of a narrow gauge railway from Kagi City, on the Government trunk line, to the company's headquarters on Mount Ari, 7,200 feet above sea level. The survey for this line was completed a year ago. To carry this road from Kagi at sea level 40 miles to its mountain terminus will require the construction of 90 tunnels and the expenditure of nearly \$2,000,000. This company has a concession from the Formosan government to about 36,000 acres of forests, which it is said contain about 1,000,000-board feet each of soft and hard woods. The construction of the road is at present at a standstill, owing to the financial stringency in Japan. Efforts are being made by the Fugita Gumi to get the wealthy families in Japan interested in this mountain railroad and lumber project. [Accompanying Consul Arnold's report were the following maps and illustrations, which are filed in the Bureau of

Manufactures: (1) Map of Formosan railways; (2) railway bridge over the Dakasui River; (3) railway bridge over the Naisha River; (3a) bird's-eye view of Naisha River and entrance to tunnels; (4) railway bridge over Gyotopin Valley; (5) railway bridge over Daiko River; (6, 7, and 8) views of entrances to three tunnels, and (9) spiral on the Arisan Railway.]

BRITISH SOUTH AFRICA.

OPENING OF AN AGRICULTURAL RAILWAY IN NATAL.

Consul Edwin S. Cunningham, of Durban, furnishes the following information concerning the opening of a government railway in Natal:

It is announced that the governor will formally open on June 2 a railway connecting Stuartstown with the coast line. The line when completed will be 97 miles in length, extending from Esperanza to Donnybrook. This line has been constructed by the government and opens up an agricultural district of the colony. The recent policy of the Natal government has been to offer the greatest possible encouragement to the development of the lands, and the construction of this line is only the carrying out of the policy of giving every facility possible for the cultivation of the lands and transportation to the best markets.

STRAITS SETTLEMENTS TRADE.

DECLINE RECORDED IN BOTH IMPORTS AND EXPORTS.

Vice-Consul-General George E. Chamberlin sends from Singapore the following summary of the foreign trade of the Straits Settlements for the first three months of this year:

The official statistics of imports and exports for the quarter ended March 31 show a decrease of imports into the colony of \$2,806,762 and a decrease in exports of \$4,235,815, as compared with the statistics for the first quarter of 1907. The total decrease in the trade of the colony from January 1 to March 31 therefore is \$7,042,577.

Of the three ports of the colony, Singapore, Penang, and Malacca, the first shows by far the greatest loss, the imports falling off \$2,425,983 and exports \$3,705,614. Tin is responsible for the largest decrease in exports. During the quarter 14,763 tons of 2,240 pounds each of tin and tin ore were exported, at a value of \$10,057,985. In the same quarter last year the figures were 14,219 tons, and \$12,797,670 value, thus showing an increase in the export of tin from the Straits Settlements of 544 tons and a decrease in value of \$2,739,685.

During the quarter 346 tons of Para rubber were exported, the value being \$625,395, as against 201 tons, and \$531,951 in value during the corresponding quarter of the previous year. While the increase in quantity was 145 tons, the increase in value was only \$93,444.

The freight on rubber from Singapore has been increased from 50 shillings to 60 shillings (shilling=24½ cents) per ton of 50 cubic feet by the Homeward Shipping Conference, and the through rate from Port Swettenham, which previously stood at 65 shillings, has been increased to 75 shillings.

BRAZILIAN PURE-FOOD LAWS.

REQUIREMENTS FOR THE ADMISSION OF FOREIGN ALIMENTARY GOODS.

Consul-General George E. Anderson, of Rio de Janeiro, calls attention to the fact that the increasing importations into Brazil of a widely differentiated line of special food products, instead of the few staple food products which have been imported into the country through practically all of its history, is giving more and more importance to the pure-food legislation of the country, which he treats as follows:

Such legislation is of particular importance to the United States since the proportion of food products in the exports of the United States to Brazil is large, and also in view of the fact that under the system of export generally in vogue in the United States as regards Brazil direct cooperation between the manufacturer of a food product and the exporter is seldom established. Foods are manufactured and sold to an exporter without any knowledge on the part of the manufacturer as to what country will receive them. The result has been that in many cases the foods did not meet with all the requirements of Brazilian laws and have been refused admittance or at least subjected to delays both expensive in a general way and injurious to the goods. Proper knowledge on the part of the American manufacturer and exporter of the conditions of food import into Brazil will save considerable trouble and avoid material loss. Brazilian laws governing the sale and importation of foods are strictly enforced and penalties for violating them are severe.

The food laws, which apply as well to drugs, medicines, and all articles intended for human consumption, are somewhat complicated, being scattered over a number of years and included in a number of executive decrees which can be had only in pamphlet form separately. With a view of avoiding some of the difficulties heretofore met with on the part of American exporters the bureau of analyses of the Brazilian Government has prepared an epitome or outline of the several laws in question for this consulate-general which is as follows:

PURE FOOD REQUIREMENTS.

Article 40 of law No. 428, of December 10, 1896, prescribes as follows:

Wines, lard, and all other food products condemned by the national laboratory shall be destroyed and the importers thereof fined Rs. 500\$000 (\$150). There shall be condemned as injurious to health: Wines and all food products which contain boric acid or salicylic acid; alcohol of poor quality, the free mineral acids, sulphuric, sulphurous, azotic, chlorohydric, sulphites, alum, fluorates, and alkaline fluosilicates, saccharine, compounds of strontium, lead, zinc, tin, arsenic, antimony, sulphate of potassium—in the proportion of two grams (gram=15.4324 grains) per liter (liquid liter=1.0567 quarts) of wine; in beer, substitutes for hops, such as absinthe, quassin amara, colchicum, picrotorine, colocynth, vomica-nut, picric acid, aloes, as well as any essentials prepared with ethereal oils, coloring matter derived from coal tar and of a lead base, mercury, copper, arsenic antimony, baryte, or any other substances which science has recognized as injurious to health.

The importation of artificial wines is prohibited under all circumstances, even though they do not contain substances injurious to health, the first part

of this section being applicable in their case if within a time set by the inspector of customs they be not reexported.

Law No. 489, of December 15, 1897, prescribes as follows:

Article 49, after the words "liter of wine" is added "except in cases of wine whose proportion of alcohol exceeds 20 per cent, when the proportion of sulphate of potassium allowable is raised to four grams per liter."

Article 11 of law No. 559, of December 31, 1898, sets forth the following:

There shall be condemned as noxious to public health cognacs, whiskies, rums, gins, and other imported alcoholic beverages, natural or imitated, which contain more than three grams (globular measure) of poisonous impurities—aldehydes, ethereal oils, furfural, higher alcohols (alcooes superiors), acetic acid, etc., to 1,000 grams of alcohol of 100 per cent grade, or one and a half grams of the same to 1,000 grams of alcohol 50 per cent pure.

Budget law No. 1452, of December 30, 1905, condemns "all alcoholic liquors which contain absinthe or any other noxious essentials."

EXAMPLES OF FOOD CONDEMNATIONS.

In conformity with the laws cited, there have been condemned by the National Laboratory of Analyses various lots of wines, beers, vermouths, cognacs, aguardientes, whiskies, gaseous limades, various preserves, sweets, butter, essential solutions, etc.

In the wines condemned the elements most frequently encountered are salicylic acid, sulphate of potassium in amount greater than 2 grams per liter, and at times in amount greater than 4 grams per liter in wines whose per cent of alcohol exceeded 20, coal-tar coloring matter, sulphites, and free sulphurous acid.

In beers the most commonly occurring noxious substance was salicylic acid.

Various vermouths were condemned as containing absinthe and others were condemned as containing more than 2 grams of sulphate of potassium per liter, and various whiskies, cognacs, and aguardientes were condemned as containing more than 50 grams of impurities per liter of alcohol 50 per cent pure.

In the gaseous limades the condemnations were due to the presence of salicylic acid and of artificial essentials manufactured with ethereal oils.

In the case of condemned meats, and particularly hams, there was found boric acid, and in some preserves of vegetables salicylic acid was found.

Condemned sweets and fruit preserves were found to contain salicylic acid and coloring matter derived from coal tar.

Some butter was withheld from consumption owing to the presence of boric acid therein. Finally, of the essential solutions analyzed various ones were condemned as containing essentials made from ethereal oils.

EXTENT OF LENIENCY—COST OF ANALYSES.

These are the products most frequently condemned according to the laws which are carried out by the National Laboratory of Analyses. Only in the case of sulphate of potassium in wines and liquors is there any leniency on the part of the laws. In the case of other noxious substances the quantity of the substance contained in food or drink products does not affect the treatment of the same.

Article 1 of law No. 1837, of December 31, 1907, modifies law No. 1452, and orders that all alcoholic drinks containing more than traces of absinthe or any other noxious essential shall be condemned. Article 8 of this law says:

The importation of wines, in which the quantity of sulphurous anhydride does not exceed 200 milligrams per liter, free or combined, is allowable, the Government being authorized to raise this limit to 350 milligrams.

A later law (No. 6801 of February 27, 1908), raised the first limit of 200 milligrams (milligram = 1-1000 of a gram) to 350 milligrams of anhydride of sulphur.

In the course of administering this legislation the Brazilian Government requires an analysis of every consignment of food products imported in Brazil, as well as of all such products offered for sale within the country. Such analyses are made without regard to brand, mark, or the known quality of goods, and American exporters must be prepared to conform to such requirements with every shipment. The usual fee for each such analysis is Rs. 20\$000 (\$6.67), but the fee may be increased under extraordinary circumstances.

BURMA AND KARACHI.

SATISFACTORY INCREASE OF TRADE AT BOTH PORTS.

Consul-General William H. Michael, of Calcutta, furnishes the following statistics relative to the trade of Burma and Karachi:

The value of the exports of merchandise from Burma during the last five years has remained about the same. In the fiscal year 1903 the value of exports was \$51,578,845, and in 1907, \$50,487,568. The value of the imports show a decided increase during the same period, viz, \$19,851,548 in 1903 and \$31,253,872 in 1907. The chamber of commerce declares in its report just issued that there is ground for satisfaction with the trade of Burma for the last five years.

According to the report of the Karachi Chamber of Commerce the total value of the trade of Karachi in 1898, 1903, and 1907 amounted to \$60,148,897, \$78,129,383, and \$129,551,933, respectively, thus doubling in value within ten years.

During 1903 the number of vessels that entered the harbor was 580, having a tonnage of 828,565, as compared with 783, with a tonnage of 1,429,428, in 1907. The report congratulates the port of Karachi on its steady and substantial advancement commercially.

It plainly appears from the report that Karachi needs more grain elevators, of a modern kind, for handling the rapidly increasing export of wheat and other grains. Attention is again called to this opening for American elevator builders in Karachi.

Japanese Government Orders Steel Rails in Russia.

Vice-Consul Harry Suslow, of Moscow, writes that the administration of the Russian Dnieprovskiy Metallurgic Company recently signed a contract in St. Petersburg with the Japanese Government for the supply of 360,000 poods (5,806 tons) of steel rails. The weight of the rails is to be 24 pounds to the current foot. The rails are to be delivered at Port Dalny for the southern parts of the Manchurian Railway.

PRINCE EDWARD ISLAND CROPS.

AN EXTENSIVE OUTPUT OF FARM PRODUCTS FOR LAST YEAR.

Consul Franklin D. Hale, of Charlottetown, submits the following statistics on the agricultural products of Prince Edward Island for 1907 as reported officially by the commissioner of agriculture of that Canadian province:

Article.	Quantity.	Value.	Article.	Quantity.	Value.
Wheat.....bushels.....	650,000	\$650,000	Cattle exported.....		\$28,000
Oats.....do.....	10,000,000	5,600,000	Horses exported.....		230,000
Barley.....do.....	200,000	120,000	Hogs raised.....		450,000
Buckwheat.....do.....	49,000	24,500	Lambs exported.....		75,000
Mixed grain.....do.....	500,000	250,000	Poultry.....		150,000
Potatoes.....do.....	4,000,000	1,000,000	Wool.....		75,000
Roots.....do.....	4,000,000	480,000	Eggs.....		250,000
Hay.....tons.....	150,000	2,400,000			
Dairy cheese and butter.....		100,000	Total.....		11,582,500
Factory cheese and butter.....		300,000			

The commissioner reports that the grains produced in the province are of superior quality, free from weeds, and well adapted for seed grain. During the same year the value of the island fisheries was about \$1,220,000, making a total of nearly \$13,000,000 as the agricultural and sea product of the province for the year 1907. Prince Edward Island contains only 2,184 square miles, but it is said that with more careful cultivation and use of now uncultivated lands its productivity could be doubled, while the fisheries yield from the adjacent waters could be indefinitely increased.

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FLOUR-MILLING INDUSTRY.

THE UNITED KINGDOM.

MARKETS OF SCOTLAND—AMERICAN SALES MAY BE EXTENDED.

Special Agent M. H. Davis makes further report of results of his investigation of the markets of Scotland, and points out how sales of American flour may be increased. Under date of July 13 he writes from Dundee:

The eastern half of Scotland gets its flour supplies through the mills and merchants of Leith, Edinburgh, Dundee, and Aberdeen. Aside from Glasgow there are many towns of from 5,000 to 30,000 inhabitants. In round numbers a population of probably 1,500,000, certainly over 1,200,000, looks to the above-named four cities for the greater part of its needs in breadstuffs. The energy of the Glasgow merchants, dominating as that city does the western two-thirds of Scotland, has reached into the eastern third and secured footholds for a very considerable part of the trade naturally inclined to Leith, Dundee, and Aberdeen. This competition and that of the flour mills at Leith have in large measure cut down the possibilities of extensive direct trade between the importers of Leith, Dundee, and Aberdeen with mills in the United States. Still the business put through from year to year has amounted to very considerable proportions, and the importers all feel that there is no reason for less prospective trade on the new crop. In fact, I find in these cities, as elsewhere, a keen appreciation of the efforts of the Department of Commerce and Labor and of American mills for the extension of trade and a hearty determination to second them.

RELATIONS OF EDINBURGH AND LEITH.

In America we would probably speak of Edinburgh and Leith as the twin cities. Their corporate boundaries join, and a stranger can not tell where one begins and the other ends. Thus they are practically one city, with a combined population of 430,000, of which 350,000 is ascribed to Edinburgh and 80,000 to Leith. The population of the trade territory tributary to Leith as a distributor of flour, outside the two cities, is placed at 250,000 to 300,000. Leith being the port of entry claims the mills and the flour importers. The docks and facilities of Leith for handling flour are unsurpassed. There has been no marked increase in recent years in the milling capacity, and not much is known outside of the mills themselves regarding

their operations except as they are met with in a competitive way. Then, too, the policy of the mills seems to be aggressive enough to maintain established trade. As in the case at other milling points in the United Kingdom, the ground gained by the local mills in 1904 has never been lost. The Leith mills, however, do not grind for fancy high standards of quality, as some at other points prefer to do. They are content to hold the trade they have on bread flours, and to this end use hard wheats and produce what would be termed "long" rather than "short" patents. The extent of their operations of late may be judged from the fact that in 1907 there were imported 4,655,000 bushels of wheat, enough to make considerable over 1,000,000 barrels of flour, and from January 1, 1908, to June 30, the wheat importations exceeded 2,454,000 bushels, or enough wheat to make 545,000 barrels of flour. Very little local wheat comes to the mills of Leith, though some thousands of bushels reach there annually by coastwise vessels not included in the foregoing figures. While always grinding on the harder varieties of wheat, it is noticeable that the mills are now using the milder hard wheats, particularly those of Argentina.

FLOUR TRADE OF LEITH.

Leith's imports of flour in 1907 were 554,000 barrels, and for the six months ending June 30, 1908, they were 302,000 barrels. Transactions are in sacks of 280 pounds each, and packages mostly used are jute 280-pound and 140-pound bags, and cotton 140-pound bags. Of the foreign flour imported the United States furnishes 85 per cent, Canada 10 per cent, and European countries the remaining 5 per cent. I can see no reason why this percentage of trade should not be retained by the United States. The total volume of American trade in flour would be largely increased only in event of failure of the wheat crop in Argentina to furnish such abundant supplies as for the past two years. The mills are prepared to supply two-thirds of the requirement of flour, and very considerable amounts of flour from the mills of Glasgow, Carlisle, Liverpool, and Hull find their way into what may be termed Leith territory. Even with its large percentage of imported flour it is doubtful if the United States furnishes over one-fourth of the flour consumed under present conditions.

PREFERENCE FOR AMERICAN FLOURS.

The bread used in and about Edinburgh and Leith and territory naturally tributary is the bake-shop product, very little home baking being done. Large bakeries are forcing the smaller shops out of business, as seems to be the case wherever bake-shop bread has superseded home baking. American mills should not relax their efforts on this trade, for our flours are very well thought of, and with anything disturbing the wheat supply of the local and English mills buying would turn to American goods. Conditions have favored the local mills the past two years—in fact, for four years past—and still our American flours have not lost trade as heavily at Leith as at some other ports. There has been a shift, however, in hard-wheat flours from Minnesotas to hard winters. These constitute about three-fourths of the imports from the United States, while the other one-fourth is soft winter-wheat flour.

With delayed and irregular shipments to overcome, so that shipments may be relied upon to reach destination within forty days from

mill, the Leith importers give assurances of not only maintaining but largely increasing their trade with American mills. The American flours coming to Leith as a rule are of a higher class than those of local production. They have the preference at slightly higher prices than the home product, and this advantage could be dwelt upon profitably, it would seem, by judicious advertising, with more than a fair prospect of increased trade.

INVITING FIELD AT DUNDEE.

Dundee has a population of upward of 160,000 and is a first-class port of entry. Weekly and semiweekly steamers reach Dundee from London, Liverpool, Hull, and Leith. Some of these are rather small affairs, owned and operated by flour-milling concerns. The territory tributary to Dundee contains a population of 80,000 to 100,000. Assuming the consumption of flour to be one sack, or 280 pounds, per capita, there is a possible annual requirement for Dundee and territory of about 360,000 barrels. There is only one mill at Dundee, and that is running on blended wheats with a weekly output of 1,200 sacks, equal to 1,700 barrels. The importations from all points, British and foreign, may possibly reach as high as 160,000 barrels annually, but by far the greater part of this at present is British flour. If by any means these can be displaced a considerable field is open for American enterprise, since of late years but slightly more than 35,000 barrels annually reaches Dundee from the United States. Canada has some foothold here, about 7,000 barrels per annum, and German, French, Hungarian, and Australian flours of inconsiderable amounts, say, from 500 to 700 barrels from each of the countries named, also find a few customers in and about Dundee.

As in most Scottish communities hard wheat flour has the preference in the Dundee market, being full three-fourths of all consumed, the soft winter wheat product forming the balance. There is little home baking.

The United States shipments reach Dundee via London and Leith at an arbitrary rate above London of about 6 cents per 100 pounds.

ABERDEEN AND TRIBUTARY TERRITORY.

In population the city of Aberdeen is said to equal that of Dundee, say 160,000 to 170,000, but with much less tributary territory. It is thought that outside of Aberdeen proper a population of not exceeding 20,000 or 25,000 is dependent upon it for its bread supply. There is no flour mill in Aberdeen. A liberal allowance for flour consumption would be 260,000 barrels per annum for the entire territory, including the city. One baking concern, the Northern Cooperative Baking Society, doing a general merchandise business, manufacturing boots and shoes, and having its own oatmeal and feed mill, is by odds the largest baking concern. It bakes up weekly about the equal of 1,150 barrels of flour. There is at present no direct line of steamers from America to Aberdeen. A line from Montreal that operated three steamers last year was sold out and the boats withdrawn from this service.

An old established firm, that of Watson & Philip at Dundee, having warehouses in both Dundee and Aberdeen, do practically all the importing of American flour for both cities. As is the case at other points, their operations have been greatly handicapped by long time

in transit and irregularity in arrivals of American flour. The interest of buyers, though better suited with American product, is frequently directed to flours milled at Leith, Glasgow, and other British points, because of the certainty of prompt delivery. Hog products from Chicago, in which Watson & Philip have a large trade, require but six days from Chicago to steamer, and make the remainder of the trip in twelve to fourteen days, while flour seldom makes the trip from mill to Dundee inside of forty days, and more often requires twice that time.

The north of Scotland covered by Dundee and Aberdeen is worked by Glasgow flour importers as well as by the British mills, and the former have possibly a dozen traveling men canvassing the buyers in weekly or fortnightly trips.

DELAYS IN SHIPMENTS.

I have suggested in several conferences held with the management of steamship lines at Glasgow relative to the delay in American shipments of flour, that the American representatives of the steamship lines making contracts with railroads and millers for export flour should be instructed to follow up the contracts when made to see that every reasonable effort is put forth to get the stuff to the seaboard. I have maintained that the duty of the steamship agent did not end with the booking of the contract, but that he should see that the other parties to the contract, the railroads as well as the miller, should do all possible to expedite it. What in the past has seemed nobody's business should be made the express business of the carrier making final delivery. I am pleased to say that my view on this point was given consideration, and in two cases assurances were given that methods would be adopted carrying out my suggestion. I think the steamship people are all anxious for some solution to the vexing question of delays. They need more business, as the scores of idle freight steamers at all ports, laid up because there are no cargoes offering, are ample proof.

NOTES ON THE SCOTCH FLOUR TRADE.

The natural preference at all Scotch points is for American flour. The importers keenly feel the competition of home mills. America can hold the preference, and overcoming present obstacles can make decided growth.

Glasgow port charges, for reasons no man can satisfactorily explain, are 1s. 3d. per ton more on flour than on wheat. This is equal to about 3 cents per barrel. Thus the local miller is given a substantial advantage.

It would greatly aid American mills if they would frequently send to their importers for samples of British-made flour against which they are in competition. The importers will gladly secure and send such samples. Particularly is this of value to the miller on the advent of the new crop of Australian and Argentine wheat.

Rates to Glasgow from Dunkirk, France, via Leith, are 12s. 6d. per long ton (equal to 13½ cents per 100 pounds). This is by canal from Leith, and of course there is no landing charge. The rate by steamship from Dunkirk is 6s. per ton plus 3s. 4d. landing charge.

From Hamburg to Glasgow the rate is 9s. per ton (9½ cents per 100 pounds), with a rebate of 6d. (12 cents) per ton, providing the contractor will ship 500 tons in one year.

Millers should always communicate with importers when unable from any cause to get shipments out on time. In nine cases out of ten the importer can then arrange with his buyer so as to extend time of shipment. Otherwise loss may result to both importer and miller. A buyer will almost invariably cancel when he finds his shipment has not gone forward on time if the market has fallen meanwhile, and the importer must make a concession to hold the order.

Comparatively little consigned flour reaches Scotch markets. Very few importers encourage consignments except for sample lots from new accounts. The consignment of flour seldom makes money for the miller and often embarrasses the importer. Nothing can be gained by consigning for future sales or sale on arrival, for, generally speaking, the same conditions of unsatisfactory markets prevail on this side when a similar condition prevails in the United States.

Following is a list of flour importers in Scotland not heretofore given:

LEITH.

Peter Dowie & Co.
Wilson & Dunlop.
W. J. Stockman & Son.
Thomas Macnab & Co.
Bruce, Boyd & Co.
Highgate & Cownie.
Jas. Greenhill.

DUNDEE.

Watson & Philip.

GLASGOW.

Bruce & Wilson, 70 Wellington street.
Crawford & Law, 81 Hope street.
Cochrane & Black, 67 Hope street.
R. Carson & Co., 50 Wellington street.
Dempster, Peterson & Co., 118 Queen street.
J. A. Dunlop & Co., 25 Wellington street.
Peter Dowie & Co., 19 Waterloo street.
Farquhar Bros., 67 Hope street.
William Gilchrist & Co., 93 Hope street.
A. Hamilton & Sons, 25 Robertson street.

R. Hunter Craig & Co. (Limited), 12 Waterloo street.
D. & W. Ker, 26 Bothwell street.
Anton Kufek, 67 Hope street.
M. Kosmack & Co., 67 Hope street.
William Kerr & Co., 45 Hope street.
James Keith, 84 Cadzow street, Hamilton.
McConnell & Reid, 19 Waterloo street.
McKinnon & McDonald, 21 Hope street.
James McCara, 19 Waterloo street.
W. Morrison & Son (Limited), 29 Waterloo street.
Mowat Brothers, 50 Wellington street.
Robert Neill, 57 Hope street.
J. Osborne & Co., 60 Virginia street.
S. & A. Runcie, 67 Hope street.
Russell & Baird, 73 Robertson street.
Smith & McKay, 59 Robertson street.
G. H. Thomson & Co., 8 Wellington street.
White & Kirkland, 50 Wellington street.
John White & Sons, Scotstoun Mills, Partick.

ARGENTINA.**UNIFORMITY OF QUALITY SOUGHT FOR EXPORT.**

Consul-General Alban G. Snyder writes from Buenos Aires that the Argentine Minister of Agriculture, as a result of statements that Brazilian and American flour were superior to the Argentine brand, ordered samples of said flours to be sent to him for analyses, so that the defect, if any, might be remedied. The public analyst states that so many different qualities of Argentine flour are exported to Brazil that a comparison of their respective merits with the one specific grade sent from the United States is impossible. In order to be able to compete with American flour it is stated that some effort is to be made

to decide on a uniform quality of flour for export to Brazil and to maintain this standard so adopted.

SPAIN.

NO FLOUR IMPORTS NECESSARY—ARGENTINE WHEAT.

One of the largest importers of flour at Barcelona writes to Consul-General Frank D. Hill as follows:

On account of the prohibitive duties we do not think any quantity of wheat flour has up to date this year been imported into Spain. Important importation took place in 1905 and part of 1906, when wheat crop had been very deficient, and the Spanish Government, due to the special circumstances, made a very important reduction upon duties on flour so that it entered almost duty free from foreign countries (chiefly from France). In our opinion such will not be the case this nor next year.

We are not able to state the total amount of wheat imported this year until the customs house reports appear in print. For our part we have, since January, imported about 300,000 metric quintals (30,000 tons) from Russia and the Argentine Republic.

CONDITIONS IN SAKHALIN.

SETTLEMENT AND DEVELOPMENT PUSHED BY CENTRAL JAPANESE GOVERNMENT.

Ambassador T. J. O'Brien, at Tokyo, forwards the following translation by Student Interpreter A. A. Williamson on the conditions and resources of Sakhalin Island as viewed by a Japanese publication:

The resources of Sakhalin Island being of considerable moment, the following statements showing the results of the latest investigations will be found timely and interesting:

The fisheries, being one of the most important sources of wealth in Sakhalin, are carefully supervised by the Government and permits to fish over limited areas are issued. Last year 2,874 persons received permits and 3,460 vessels engaged in the business. The catch last year was valued at \$2,847,000. The season begins in April. Cod were plentiful this year as usual.

The survey of land, in progress since 1905, having been accomplished, 10,913 divisions of 3,000 tsubo (1 tsubo = 3.9538 square yards) each have been made. One settler receives a loan of 22,500 tsubo, besides necessary seeds and domestic animals. In 1906 and 1907, 800 families emigrated to Sakhalin, and at present many more are emigrating thither. In 1906-7 the crops were poor, owing to bad weather and a late distribution of seed. Cereals and tubers thrived best; in some places the yield exceeded that of an equal amount of land in Japan proper in both quantity and quality. As there was plenty of time for a proper distribution of seed this year, better crops are expected.

The pasturage of Sakhalin makes it well suited to cattle raising. During Russian occupation the area of grazing land increased considerably. Since 1906 an experimental station has been established at Sorolyofuka, from which seeds and animals are distributed and at which place cattle, horses, hogs, sheep, and goats are bred. These are loaned to settlers to help develop the country. There are now 1,292 head of cattle, 1,492 head of horses, and 989 hogs.

Minerals are sure to be a source of considerable wealth. So far there are only two sections in the eastern part of the island open for prospecting, but coal and gold dust are found in considerable quantities throughout the whole island.

Examination has brought to light considerable iron-sulphate and oil-bearing strata. A more minute inspection will be made by the Government.

The forests of Sakhalin cover 3,000,000 chobu of 3,000 tsubo each. The investigation of 1906-7 showed a total of 12,461,790,000 feet of evergreen and 21,500,000 feet of broadleaf suitable for export. Investigation as to the best method of cutting is now being made.

EXHIBITIONS AND CONVENTIONS.**CANADA.****IMPORTANT ANNUAL AGRICULTURAL FAIR AT SHERBROOKE.**

Consul Paul Lang advises that the twenty-fourth annual exhibition of the Eastern Townships' Agricultural Association of the province of Quebec will take place at Sherbrooke from August 29 to September 5, 1908. The consul calls attention to its importance.

This is one of the largest fairs held in Canada. Its grounds are well situated and contain about 63 acres. Its buildings are commodious and spacious, many new structures being erected last year to accommodate the Dominion Fair, which was held here in September, 1907. The attendance at this annual fair is from 20,000 to 30,000 daily.

Many exhibits of American goods are made from the New England States with good results. I would advise displays of American productions at this fair in the following lines: Asbestos mining machinery, copper mining machinery, automobiles, boots and shoes, dairy and farming machinery, and musical instruments. Space for exhibits may be obtained by application to W. M. Tomlinson, secretary, Sherbrooke, Canada.

GERMANY.**INTERNATIONAL LIFE-SAVING CONGRESS AND EXPOSITION.**

Consul-General Richard Guenther writes that at the International Life-Saving Congress and Exposition—the first of the kind—which took place at Frankfort recently, the governments of twenty-seven nations were represented.

Besides these, 72 state and municipal authorities sent delegates, and 96 organizations concerned in the life-saving system participated in the proceedings of the Congress. The lectures and addresses before the Congress were of great interest and they were ably complemented by the two expositions, one of which comprised the scientific part—literature, graphic delineations, models, etc. The other showed the transportation methods, equipments, and apparatus. Several of the German States sent organized companies of the Red Cross service, which demonstrated their life-saving system by evolutions on the military parade grounds at Griesheim, a suburb of Frankfort. It has been felt for years past that by holding international congresses and expositions of this sort the cause of humanity and international good will would be much advanced. Now that this first International Life-Saving Congress has successfully met others are likely to follow in the future.

AUSTRIA-HUNGARY.**INTERNATIONAL DAIRY CONGRESS AT BUDAPEST.**

The British consul at Budapest reports that the fourth International Dairy Congress will be held in the capital of Hungary in the month of June, 1909. Applications for membership must be sent,

with a fee of 10 crowns (\$2.03), to Dr. Stephen Koerfer, general secretary of the organization committee at Budapest.

SWITZERLAND.

WHITE CROSS SOCIETY ORGANIZES PURE-FOOD MOVEMENT.

According to press reports quoted by Consul-General Richard Guenther, of Frankfort, a movement has recently been started in Switzerland to fight and suppress the adulteration of foodstuffs and pharmaceutical productions throughout the world.

For this purpose a General Society of the White Cross has been organized at Geneva, which aims to consolidate the isolated efforts hitherto made in different countries against food adulteration. By united action it is confidently believed practical results can be obtained. In pursuance of this object a general congress is to be held next September at Geneva, to which public authorities, associations, manufacturers, and other interested parties will be invited. The Swiss Government has already manifested its sympathy with this movement by the grant of a considerable subvention, and it will send three delegates to the Congress. For further information address Robert Fazy, secretary of the congress, Rue du Rhone 42, Geneva, Switzerland.

CATALOGUE SALES IN MEXICO.

INCREASING IMPORTATIONS OF AMERICAN GOODS AT MATAMORAS.

Consul Clarence A. Miller, of Matamoras, gives the following examples of the successful introduction of American goods in that part of Mexico through catalogues:

Importation of machinery for the development of this district goes steadily on. Last year one company imported between \$10,000 and \$15,000 worth of machinery for the digging of wells and pumping of water, and this year the importations will be about the same amount.

A large boiler engine, 25 horsepower, has just arrived for the Santa Rosita ranch, which is about 9 miles above Matamoras.

During the past six months a considerable amount of household and office furniture has been imported from the United States.

The greater part of these sales is made through catalogues and correspondence.

As further illustrating the possible benefits to be derived from the sending out of catalogues attention is called to the following instance: A certain manufacturing company, having noticed a small item in the Daily Consular Reports early in June in regard to the importation of an American wagon and buggy, sent a handsome catalogue to this office. This catalogue attracted the attention of a gentleman of this city, who as a result is about to purchase a buggy and wagon. While catalogues are not as effective as salesmen, yet these instances serve to show that they still bring results.

As showing the increasing importance of this place in regard to importations, attention is invited to the fact that the Government has raised the custom-house in this city from the sixth to the fifth class.

AGRICULTURE IN JAPAN.

TWO AND THREE CROPS RAISED ANNUALLY FROM ONE FIELD.

Consul Hunter Sharp, of Kobe, transmits the following review of agricultural conditions in Japan, in which he calls attention to the natural obstacles that confront the agriculturist, the aid extended to him by the Government, and the results obtained from a very small acreage:

Japan has an area of 148,852 square miles, and, according to the census of 1906, a population of 48,804,397. Sixty per cent of the people are agriculturists, and yet on account of the mountainous nature of the country, only about one-sixth of the total area is under cultivation. Efforts are being made to enlarge the small irregular lots into which arable land is divided; to rearrange and straighten roads built for agricultural purposes and waterways; to put to profitable uses pieces of land which now lie waste among cultivated fields; to improve land by irrigation; and to promote the use of machinery in agricultural pursuits.

Recent investigations have been made as to the possibility of converting woodlands into rice fields by utilizing the water of certain rivers, and the scheme has been found feasible. As the result, 3,000 acres of land in this prefecture alone will be taken up for cultivation in the near future.

With the object of facilitating the supply of capital for agricultural purposes, the Government in 1896, established the Hypothec Bank of Japan, as well as the Agricultural and Industrial banks.

The Government, moreover, established experimental stations at Tokyo and in certain provinces for the purpose of making experiments in the selection and supply of seeds and seedlings, also to make investigations relative to insect pests and agricultural implements.

The farm laborer works from sunrise to sunset. Men receive 17 to 22 cents, and women 10 to 15 cents per day, the employer paying for their subsistence. The value of farm lands varies according to proximity to market and quality. The average value of rice fields is about \$1.50 per tan (tan = 0.2451 acre); and for uplands \$50 per tan. Taxes assessed on these lands are: National tax, $5\frac{1}{2}$ per cent of the value of the land; prefectural tax, $17\frac{1}{2}$ cents for every 50 cents of the national tax; village tax, $4\frac{1}{2}$ cents for every 50 cents of the national tax. Taxes for repairing roads and water privileges vary from 50 cents to \$1 per tan.

PRIMITIVE IMPLEMENTS STILL IN USE.

Modern implements have not yet been adopted in this country. The narrow-blade plow and the foot-tread machine for irrigating are still in use. Sowing, harvesting, and thrashing of grain are done by hand, the small and irregular size of the fields preventing the use of large machinery, individual holdings varying from one-half to ten acres. Consignments of plows have been made here, but have not met with success, the native plow being cheaper and better adapted to the work. The duty on farming implements is 20 per cent ad valorem. [Pictures of these Japanese implements, with retail prices and dimensions, were submitted with this report and may be seen at the Bureau of Manufactures.] On the land known as rice fields, wheat, barley, or rape seed are sown about

November, the crop being gathered the following June. Immediately afterwards the rice is planted, and is harvested in October. On the upland fields either wheat, barley, or rape seed is sown and harvested at the same season as above mentioned; after which corn, cotton, beans, panicum miliacum, and various vegetables are sown, maturing at different times. Millet and potatoes are planted in March and gathered in August; buckwheat is sown in August and harvested in October. In the southern part of Japan two crops of rice and one of wheat or barley are grown the same year, though but one crop of rice is raised during the year in Hokkaido.

FERTILIZERS FREELY USED.

Not only from the fact of having to raise several crops a year, but because of the long number of years the lands have been under cultivation, they require heavy fertilizing to obtain favorable results. The remarkable increase in the demand for artificial fertilizers is a noteworthy feature of Japanese agriculture. Ten years ago the demand was met by home products, but with the development of agriculture supplies have been sought from abroad. In 1906 the importation into Japan of oil cake alone amounted to \$7,793,766, of which China supplied \$7,436,958; ammonium sulphate, \$2,637,751, to which Great Britain contributed \$2,543,264, while the United States sent nitrate of soda to the value of \$34,236; oil cake, \$3,823; and phosphorites, \$74,211, aggregating \$112,270.

In addition to the artificial manure imported, animal excrements are collected from all parts of the country with great care, stored in cesspools in the fields, and applied to the growing plants in the cultivation of barley, wheat, and various kinds of vegetables. The value of the fertilizers used per ton is about \$3 to \$4 for rice fields and \$1.50 for upland ground.

PRACTICE OF IRRIGATION.

Irrigation in Japan is carried on mostly by canals; reservoirs and artesian wells are used only to a limited extent. The water is generally led by ditches into the rice fields until it has accumulated in sufficient depth and volume. The fields are level and are encircled by boundary walls about 13 inches in height, which are so arranged as to allow the water to enter at one side and flow out by an outlet at the other side into the adjoining field or ditch. Raising the water is generally effected by tread wheels worked by men or by dipping up river or well water in buckets by hand, no pumps being used.

The irrigation works are built by water supply associations and are under the control of a county or village official. The average cost of these works is about \$60 per acre, with expenses of about 70 cents per acre per annum. The total storage capacity provided for irrigation per annum is about 60,000 cubic feet per acre. [Photographs of irrigated rice fields submitted herewith are on file in the Bureau of Manufactures.]

ONE YEAR'S CROP.

According to the statistics of 1906 the agricultural products of Japan are given as follows: Rice, the chief crop, has an acreage of

7,104,072, with a production of 229,794,826 bushels; barley comes next, with 3,359,238 acres and a production of 81,407,291 bushels; wheat, the principal crop in other grain-producing countries, occupies only 1,086,118 acres, with a yield of 19,664,325. An average crop for these three is about 30 bushels per acre. Other agricultural products are:

Crop.	Production.	Crop.	Production.
	<i>Bushels.</i>		<i>Pounds.</i>
Soy beans	17,655,973	Leaf indigo	58,804,802
Small red beans	4,449,408	Leaf tobacco	97,186,741
Italian millet	11,478,386	Rape seed	5,551,996
Panicum prumentaceum	3,799,266	China grass	4,967,446
Millet	18,006,247	Sugar cane	1,456,043,119
Buckwheat	5,970,319	Paper mulberry (bark dried)	68,797,266
Peas	1,389,706	Mitsumata (bark dried)	465,599,883
Beans	2,025,623	Wax, vegetable	97,146,002
Peanuts with pods	1,841,777	Rush for matting	92,935,059
Corn	3,032,367	Pyrethrum	224,740
Plums	3,005,721	Menthol leaf (dried)	20,774,156
	<i>Pounds.</i>	Food lily bulbs	4,575,084
Sweet potatoes	6,604,297,620	Ginseng	58,382,758
Potatoes	1,123,413,350	Peaches	49,291,672
Radish (Daikon) (principal vegetable consumed in this country)	5,244,950,658	Tea	56,382,758
Carrots	196,574,083	Pears	114,968,085
Burdock	276,516,818	Persimmons	383,118,953
Konniaku (edible root)	72,424,464	Apples	46,945,305
Bamboo sprouts	115,477,963	Grapes	20,467,496
Ginger	48,770,327	Oranges (Onshu and Kishu)	281,374,562
Chillies	2,435,168	Oranges (all other kinds)	128,960,322
Lilies (green)	4,575,084		<i>Number.</i>
Cotton seed	13,270,985	Snake gourds (dried)	4,004,734
Hemp	22,127,924	Lily bulbs for flowers	24,036,599

EXPORTS OF AGRICULTURAL PRODUCTS.

Articles.	1906.	1905.	1904.	1903.	1902.
Apples	\$131,692	\$22,223	\$5,667	\$10,234	\$2,570
Barley				51,142	45,903
Beans, pease, and pulse	76,051	70,948	60,397	82,563	42,275
Chillies	44,323	42,429	58,565	188,684	158,186
Ginger	117,665	55,462	123,098	86,005	57,202
Mandarin oranges	408,680	187,398	61,143	84,438	64,615
Onions	193,973	97,098	62,935	167,648	178,585
Peanuts	150,102	129,850	144,150	132,038	79,041
Potatoes	198,678	133,305	135,243	2,470,025	3,826,413
Rice	1,836,167	1,547,210	2,340,938	5,939,706	5,221,040
Tea	5,362,011	5,270,993	6,391,250	43,297	22,707
Other grains and seeds	279,155	229,078	115,138		

In agricultural products, tea forms the largest single item of exports, the United States taking about 90 per cent, the remainder going to British America, China, Straits Settlements, Korea, and the Hawaiian Islands. Rice comes next, the Hawaiian Islands using one-fourth, China, Asiatic Russia, and the United States about one-seventh each, British India and Australia the balance. The United States receives more than two-thirds of the peanuts exported, Australia, British America, Asiatic Russia, Great Britain, Hongkong, and Egypt following in the order named. Oranges and apples go principally to Asiatic Russia, a few shipments going to China and Korea, while the United States takes only a little of either. The export of potatoes has increased from \$79,041 in 1902 to \$198,678 in 1906, the Philippine Islands taking more than half, and the neighboring Asiatic countries the balance. The trade in onions has grown from

\$64,515 in 1902 to \$193,973 in 1906, the Philippine Islands and Asiatic Russia consuming more than half between them, and Hongkong, China, Australia, and Korea the remainder.

IMPORTS OF AGRICULTURAL PRODUCTS.

Articles.	1906.	1905.	1904.	1903.	1902.
Beans, peas, and pulse.....	\$4,839,708	\$5,275,370	\$4,295,174	\$3,980,720	\$2,881,780
Millet.....	7,914	1,395	4,096		
Rape seed.....	260,405	114,868	2,715		
Rice.....	13,083,695	28,894,670	29,776,372	25,876,215	8,839,907
Cotton seed.....	507,124	541,831	395,882	412,851	392,250
Sesame seed.....	450,829	375,415	228,939	185,811	212,623
Tea.....	23,908	20,815	16,138	16,286	15,174
Wheat.....	683,130	1,998,022	765,313	2,374,384	119,545
Other grains and seeds.....	104,211	952,285	921,939	692,515	613,123

Although Japan does not raise enough rice for her own needs, Japanese rice is exported to other countries, as its superior quality commands a high price, a cheaper grade being imported from British India, Saigon, Siam, and Korea for consumption by the poorer classes, five-eighths of the whole amount coming from the first-named country.

Notwithstanding beans, peas, and pulse are grown largely in this country, they come second among imports of agricultural products, being supplied in about equal proportions by China and Korea, small amounts coming from other neighboring Asiatic countries. These articles are prepared in various ways and form, next to rice, the staple food products of the people of this country.

Practically all the wheat comes from the United States, it being the largest agricultural product imported from that country; Korea, Australia, and British India send only small amounts.

AGRICULTURE IN FORMOSA AND SAKHALIN.

Formosa, with an area of 13,519 square miles, had a population in 1906 of 2,993,345, and produced in 1905 43,215,394 bushels of rice, 1,418,304,373 pounds of sugar cane, 16,281,970 pounds of tea, 1,508,481,344 pounds of sweet potatoes, other products being ramie 3,489,533 pounds, jute 3,303,056 pounds, and turmeric 65,292 pounds.

Japanese Sakhalin has a total area of 12,582 square miles, of which 89,296 acres can be cultivated, and in 1906 the population was 8,569. The agricultural products are barley, wheat, rye, oats, potatoes, peas, kidney beans, soja beans, red beans, hemp, flax, and vegetables. Of these the most successful are potatoes, barley, rye, oats, and wheat, and in a lesser degree peas, hemp, and flax.

Paper Making Enterprise in French Colonies.

Vice-Consul-General George E. Chamberlin reports from Singapore that plans have just been matured in France for starting paper mills on a large scale in Tonkin. Many influential paper makers in France are interested in the scheme, and capital for the purpose is readily available. Owing to the great scarcity of materials for paper making in France the attention of the manufacturers are now turned to Tonkin and Cochinchina, where there is a large amount of suitable materials, such as bamboo fiber, rice straw, etc. The Tonkinese make very fine and strong paper out of this straw, and bamboo fiber is manufactured into a serviceable article. It is stated that these facts tell heavily in favor of the enterprise.

LIFE IN TAHITI.

PEOPLE, SCHOOLS, FOOD PRODUCTS, COST OF LIVING, ETC.

The following report concerning the inhabitants of the Society Islands and their advanced social condition has been received from Consul Julius D. Dreher, of Tahiti:

Of the total population of the Society Islands and dependencies, composing the French colony of Tahiti, numbering 31,000, more than 27,000 are of the native race, a fine type of Polynesians; about 2,200 are French, and about 1,500 are of fourteen other nationalities, mainly British, Chinese, and Americans, ranking numerically in the order named. Nearly two-thirds of the population live in the Society Islands, the group most advanced in civilization. Notwithstanding the fact that the hundred islands composing the colony are scattered over an area of the South Seas extending 1,300 miles from north to south and 1,600 miles from east to west, the inhabitants of most of them have had more or less contact with civilized people for a century. Various denominations have churches in the principal settlements in the larger islands.

The town of Papute, which is the seat of the colonial government and the commercial center of the colony, has a population of nearly 4,000. Here are large wholesale and retail stores, two banks, several hotels, four schools, five churches, a free library of French books, a good hospital, a philharmonic society, two social clubs, a chamber of commerce, a telephone system, and a semaphore station. The streets are swept and the rubbish hauled off every week day. The water system is abundantly supplied from a pure mountain stream. The market, which is under the supervision of a food inspector, is supplied with an abundance of fresh meats and a great variety of fish, vegetables, and fruits (including nuts, about forty kinds of fruit grow in Tahiti). Bread, milk, and ice are delivered by carts daily.

USE OF MODERN UTILITIES.

Bicycles are common, and there are a few automobiles, for which the good roads kept up by the government are well adapted. There are letter carriers in town and a daily mail throughout the island of Tahiti. Foreign mails arrive every twenty-eight days from Auckland and every thirty-six days from San Francisco. Besides the government establishment, there are three other small printing offices in Papute. With the exception of the small sheets published by the missionaries, there is only one paper published here, the Official Journal, which is devoted mainly to official matters and announcements of all sorts.

The climate of Tahiti, though warm, is healthful. The mercury seldom goes higher than 90° or lower than 65° F. except in the mountains, which rise to the height of about 7,000 feet.

Owing to freight rates and customs duties, almost all imported articles of food, including flour, bacon, lard, and canned meats, salmon, butter, vegetables, and fruits, cost from 50 to 75 per cent more in Tahiti than in the United States. In the market prices are as follows: Beef, from 20 to 28 cents a pound; mutton, 20 to 30 cents; pork, 15 to 18 cents; chickens (small), 30 to 50 cents each; turkeys, \$2 to \$5 each; eggs, 35 to 55 cents a dozen (eggs are imported at

times from San Francisco); milk, 10 cents a quart; canned butter in stores, 39 cents a pound (no fresh butter in market); potatoes, 50 cents a peck. Fish, though plentiful in the sea, are dear in market. Vegetables, grown by Chinamen, are cheap, and so are fruits, which grow almost without cultivation. Living, on the whole, costs about 50 per cent more here than in the United States.

GERMAN TUBERCULOSIS MUSEUM.

SCIENTIFIC EFFORTS TO COMBAT AND CURE CONSUMPTION.

Consul Samuel H. Shank advises that there has been established in the city of Mannheim a tuberculosis museum, the object of which is to educate the public as to the causes of tuberculosis, its cure, prevention, etc. He describes its operations:

The museum is open three times a week for a period of two hours. During this time there are physicians present who instruct the visitors about tuberculosis. First an explanation is made as to what tuberculosis is, its causes, and how it is contracted; then how to avoid the disease, and finally how to cure it.

The museum is provided with charts which show the way in which the bacillus enters the lungs and its subsequent operations; to show the actual effects there are portions of the lungs of those who have died from the disease. There are also shown portions of the spine, throat, intestines, bones, and other parts of the body which have been affected by the disease. These are preserved in alcohol and placed in a glass case for inspection. To show the danger of contracting the disease, various samples of dust are shown in small bottles and casts showing the effect of these dusts on the lungs of laborers in mines, quarries, limekilns, paper factories, celluloid, ivory, iron, rubber, and tobacco works.

One room shows the diagrams of factories equipped for preventing the spreading of dust. There is also exhibited a model grinding machine which prevents the dust from flying about the machine. One room is devoted to the exhibition of lung protectors, inhaling apparatus, and disinfection stoves. Various receptacles for sputum are shown, not only for public use in halls and railway cars, but also pocket receptacles.

MEANS TO DISSEMINATE INFORMATION.

There is a reading room in which one may read the history of the "white plague" and its effect on humanity, with articles treating it in all its aspects. These articles are printed in different languages so that all may learn. Many pamphlets are given to visitors to take with them, so the knowledge may be disseminated as widely as possible. Companies of soldiers, street-car employees, and others are brought to see the museum, and by this means a great number of persons are reached who would not otherwise visit it.

One of the most important exhibits is that showing the nourishment contained in various food products. In order that the visitors may readily understand this, there are four rows of glass jars, one each for albumen, fat, carbohydrate, and water. The quantity of each ingredient obtained by the purchase of 50 pfennigs (12 cents) worth of various foods is shown by filling the different jars with the

proportionate amount of nourishment obtained. Printed lists showing the relative value of various foods are also given out. The following is a sample:

Foodstuffs.	Amount purchasable for 50 pfennigs.	Contains in available form—			
		Albu- men.	Fat.	Carbo- hydrate.	Water.
	Liters.	Grams.	Grams.	Grams.	Grams.
Necessary daily rations	2	118	66	500	2,050
Beer	2			93	
Raw coffee	180			27.9	21.6
Lard	280	.8	266		1.9
Butter	238	1.2	193.8	1.2	33.3
Margarine	383	1.7	281.8	1.7	30.8
Prunes	666	12	4	293	186.5
Carrots	4,166	29.1	8.3	283.2	3,707
Eggs	294	35.9	33.9		217.1
Fat pork	280	39.4	98		133
Very fat mutton	294	46.4	79.3		155.8
Spinach	2,000	48	4	64	1,790
Fat mutton	312	51.4	16.5		217.1
Rice	833	58.3	4.2	641.4	104.1
Beef	280	54.3	19.9		200.2
Rolls	1,250	71.2	5	710	411.2
Haddock	456	74.6	1.3		370.8
Pickled herring	417	76.7	65.5		197.7
Cabbage	6,250	81.2	12.5	282.5	5,625
Turnips	12,500	87.5	25	687.5	11,312
Milk	2,778	88.9	94.4	186.1	2,427
Rye bread	2,273	106.8	11.4	1,098	897.8
Potatoes	8,333	125	16.6	1,660	6,250
Army bread	2,778	133.3	11.1	1,321	1,063
Skimmed milk	5,000	146	25	220	4,525
Coarse wheat flour	1,786	150	14.2	1,196	225
Cheese	455	152.4	54.1	18.6	196.1
Lungs	1,250	168.7	28.7		1,005
Lentils	962	175	4.8	489	117.4
Peas	1,563	256.3	7.8	694	215.3

There are numerous maps and diagrams showing the prevalence of tuberculosis in Baden. They show that up to the year 1883 the disease was constantly on the increase, while since that time there has been a gradual decrease (with slight exceptions) and at the present time the percentage of deaths from tuberculosis is from 11 to 12 per cent. The maximum for Germany is 16.9 per cent, the minimum is 7.6 per cent, and the average 10.6 per cent.

A diagram shows that in the city of Mannheim the greatest number of deaths from tuberculosis occur between the ages of 25 to 30 for women and from 30 to 35 for men. There is also a map showing the number of deaths in each block of the city from 1903 to 1907. Another room gives the arrangement and location of several hospitals in Germany devoted to the treatment of tuberculosis.

The museum is under the direction of the Verein der Tuberculose Bekämpfung Ausschuss of Mannheim.

Cremation in Germany.

Vice-Consul James L. A. Burrell, in reporting from Magdeburg that the Prussian Government will in all probability introduce a bill next fall to permit the cremation of corpses in Prussia, adds:

Twelve of the twenty-six German States now allow the cremation of corpses. They are: Saxe-Coburg-Gotha, Baden, Hamburg, Saxe-Weimar, Hesse, Wurttemberg, Bremen, Anhalt, Lubeck, Saxe-Meiningen, the Kingdom of Saxony, and Reuss Younger Line.

BELGIAN BEER TRADE.**LARGE IMPORTATIONS AND EXTENSIVE BREWERIES IN KINGDOM.**

As to the prospects for the sale of American beer in Belgium, Consul H. Abert Johnson responds to an inquiry that it might gain a foothold by intelligent exploitation. He adds:

There is probably no country in the world, it is said, in which so many varieties of beer are sold as in Belgium, each important section of the country having its specialty in this line. Something above 200,000 hectoliters (5,283,600 gallons) of beer are annually imported into Belgium, mainly from Germany and England.

Beer may be classed as the national beverage of this section of Europe, as it is of Germany, and in recent years breweries have sprung up all over the country. There are 3,375 breweries, with an output of 16,400,000 hectoliters (433,255,200 gallons) per annum, in active operation according to the most recent statistics. Large plants have recently been erected for producing beers to imitate the famous German and Austrian brands, as well as the English ales and stouts.

Colombian Street Railway Contract Forfeited.

Consul Isaac A. Manning sends the information that the municipal council of Cartagena, Colombia, has declared the concession granted several years ago for the construction of a street tramway in Cartagena and suburbs forfeited. This is done on the ground that the concessionaire has not complied with certain clauses of his contract, principal among them being the one requiring him to commence work within a certain period.

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MACHINES AND TOOLS.

FRANCE.

HIGH EFFICIENCY OF SHOPS—TOOLS OF VARIOUS FOREIGN MAKES USED.

In the following report Special Agent Capt. Godfrey L. Carden describes his visit to a large automobile works at Argenteuil (Seine-et-Oise), within an hour's ride by rail of Paris. The report, dated June 10, follows:

The automobile works known as Ste. Lorraine des Anciens Etablissements de Dietrich & Cie., de Luneville, are located at Argenteuil, Seine-et-Oise. These shops can be reached by either train or tram from Paris and from Porte Maillot. Argenteuil is little more than a hamlet, and but for the advent of the Dietrich establishment would have little importance.

I have no hesitancy in saying that these works stand in the first rank among French establishments in point of shop efficiency. I have seen nowhere in France a better shop layout than here, and in a number of instances the Dietrich shops are getting a higher per cent of work out of American machine tools than most of the other French shops I have visited. This statement refers only to certain tools, and in particular to the use of some of our automatic machines. The Dietrich establishment is not as large as several other French automobile works, nor as full of orders as some others, but it may truly be said that the workmanship is exceptionally good and must soon earn for the Dietrich works increased patronage.

USE OF MODERN TOOLS.

In general the automobile works of France represent the best installations of modern machine tools. It is for this reason that special reports on the representative automobile plants are believed to be important, both for the purpose of noting the various tools used and the character of work realized. It has been pointed out in previous reports that many of the foreign shops do not fully appreciate the full capabilities of some of our standard tools, and instances might be enumerated where some of our best machines are either lying idle or are only half worked, and simply because the tools are not liked because they are not understood. The pity is that our manufacturers are not able always to spare expert men to follow up installations with personal instruction. In my report on the Brown-Boveri works an instance was cited of a visiting expert taking hold

of a Gisholt lathe and reducing the cost on pulley work from 3 francs to 60 centimes each. I have now in mind three tools of American make installed in one French shop and used practically only when other tools are not available. These three American tools are automatics, and among the best made in the United States, but they are not understood, and the firm does not hesitate to say that it does not like them. Forty-eight hours' work with these tools on the part of a first-class American machinist would, in my opinion, put them in high favor.

AMERICAN AND OTHER FOREIGN TOOLS.

Every opportunity and facility was afforded me at the Dietrich works to make a complete inspection of that plant. There is not an old tool in service at Argenteuil. Practically every machine in the shops is of recent purchase. This is only natural, since the shops have been occupied only during the past nine months. Heretofore the Dietrich works were located at Luneville. The main building is ideal, both in design and arrangement, and I doubt if there is anything finer of its kind in France. I found the following American machine tools in service on the Dietrich floors:

Baker Brothers, Toledo, Ohio, drills; J. E. Snyder & Co., Worcester, Mass., drills; W. F. & J. Barnes Company, Rockford, Ill., drills; Cincinnati Machine Tool Company, Cincinnati, Ohio, drills; Brown & Sharpe, Providence, R. I., grinders; Gleason Works, Rochester, N. Y., gear cutters; Gould & Eberhardt, Newark, N. J., millers; The Fellows Gear Shaper Company, Springfield, Vt., gear shapers; Fitchburg Machine Works, Fitchburg, Mass., lathes; Potter & Johnston Machine Company, Pawtucket, R. I., automatic turret, turning, and chucking machines; Landis Tool Company, Waynesboro, Pa., grinders; Warner & Swasey, Cleveland, Ohio, hexagonal turret lathes; Cincinnati Milling Machine Company, Cincinnati, Ohio, millers.

The following foreign-made machine tools are also used:

H. Ernault, Paris, lathes; J. Parkinson & Son, Shipley, England, vertical millers; Lubin & Weiffenbach, Clichy, France, machines for cutting keyways on big shafts; Webster & Bennett (Limited), Coventry, England, machine for cutting cam on the cam shaft; Habersang & Zinzer, Düsseldorf, Germany, automatic turret machines; "Phoenix," Brussels, Belgium, vertical miller; J. Combes, Paris, special tool for turning crank pins; "Ducommun," Mulhouse, turret lathes.

Practically all the lathes in service, with the exception of the Fitchburg tool, have been supplied by Ernault. As a rule, French automobile houses when buying lathes have confined themselves to one make, and when an American firm has secured an order it has generally been a large one. I found no less than seven Potter & Johnston automatic turret lathes in service, and these tools are turning out completed engine pistons from rough castings. The Potter & Johnston tools take the rough castings, center the work from the inside, turn all the face turns, including the flat of the head, cut all oil and ring grooves, and each tool performs the entire operation in twenty-five minutes. In a later report reference will be made to another automobile house where this same work is being performed on lathes in about three hours' time.

EXPERIENCE WITH CERTAIN TOOLS.

Director Roux, of the Dietrich works, states that he finds no trouble in using grinders on crank shafts. The claim made at the A. Clement

works that this practice tends to spring the shafting is not borne out by the experience of Dietrich. I find that the Potter & Johnston machines are also used in turning out complete wheel hubs. The hubs are finished up from the rough casting in one operation. Potter & Johnston tools were declared by Director Roux to be great savers.

I noticed that Dietrich roughs all work on the cone gears with Gleason tools and finishes up with Bilgram tools. Director Roux stated that the Gleason machines work fast and are especially good for the rough work, but that he prefers the Bilgram for work on hard steel. He further stated that it takes the Dietrich works in practice from three to three and one-half hours for grinding down shaft work, and that the claim that the work can be done in one hour and twenty minutes is not realized by his shops. He informed me that an American operator, working very hard, did the work in one hour and thirty minutes as a demonstration, but in practice the Dietrich men can not work up to this pace, and the director does not believe that it is a speed which can be maintained.

MERITS OF SOME FOREIGN MACHINES.

The majority of the twist drills in service come from Norse & Co., of New Bedford, Mass., Standard Twist Drill Company, and from stock. Among the foreign tools the machine supplied by Lubin & Wiefenbach, of Clichy, France, for cutting keyways on big shafts, is a noteworthy one. This machine has merit and is well spoken of. The Webster & Bennett tool for cutting cams on a cam shaft is referred to in high terms. The tool supplied by J. Combes, of Paris, turns all the crank pins and the inside of the flat surfaces on the crank shafts. The tool revolves around the work and appears to work accurately and quickly. I am informed, however, that this machine requires a lot of adjustments when first received, and that these adjustments will aggregate between 500 and 600 francs. This is the Dietrich experience.

OUTPUT OF AUTOMOBILES.

The Luneville shops of this company are still turning out automobiles of all descriptions. These works, originally built as forges and foundries, have been specialized in the manufacture of railway cars of all descriptions, and have also taken up as a second branch the building of automobiles. There are at Luneville, according to the statement of Director Roux, between 1,800 and 2,000 men employed, out of which number a total of between 600 and 700 are engaged in the automobile shops, turning out from 500 to 700 cars a year. Director Roux stated that although the new works at Argenteuil have been built specially for the manufacture of automobiles, the Luneville branch is still working on the same lines and will probably continue to do so for some time at least. He added that the total capacity of the two works—Luneville and Argenteuil—will probably reach about 1,000 cars a year.

The Dietrich lathe men receive on an average, working at piece-work, from 1 franc to 1 franc 10 centimes per hour. On the same basis the men at the milling machines receive about 90 centimes per hour.

ELECTRICITY AND AGRICULTURE.

WORK FOR ELECTRIC PLANTS OF SMALL CITIES ON ADJOINING FARMS.

The following notes on the use of electricity on the farm were taken by Consul R. J. Thompson, of Hanover, from parts of an address by Mr. von Podbielski, the former minister of agriculture of Germany, recently read before the Prussian Agricultural Society, upon which the consul comments:

The matter offers what appears to be a particularly good suggestion for increasing the utility of thousands of electric power plants distributed throughout the United States in the smaller cities and towns of the great agricultural districts. It should be of interest to the farmer located near towns having electric lighting power plants, and as well to the companies owning these plants and the manufacturers of electrical supplies.

It is probable that one-half of the electric power plants such as have been referred to lie idle during the day, and it would seem obvious that by study and adaptation they might be utilized in the direction indicated.

The address referred to husbandry on a large scale as being the only finally profitable system of agriculture, this being the only form in which modern technical science can be advantageously applied to this industry.

"I always pity the farmer running after his plow," said the author. "On my lands the plowman sits on a plow drawn by a motor. With the small farmer this is impossible, and consequently he is always subject to the necessity of hard physical labor."

TRANSFORMING POWER FOR FARMING.

The first thing needed to put electrical appliances to use on the farm is the electricity. This may be produced by the farmer himself in his own power plants, but it is much more practicable and convenient to buy it cheaply of some electric plant in the neighborhood. The electric plants in small cities lie idle during the daytime, their supply of current for lighting purposes being necessary only at night. In such plants the current may, as a rule, be had much cheaper than if it were produced in one's own plant.

Even if special machinery must be employed for such work, production on a large scale will always be much cheaper than the production in small power stations on each individual farm, and therefore the so-called "Ueberland-centralen," or central power houses, which supply a whole district with electric current for all possible purposes, are increasing in number and importance. The question of distances arising, the electricity in the central station is generally generated in a high-voltage current. In this way it is possible to conduct very large quantities of energy to each of the farms or places where it is wanted by means of wires no thicker than the ordinary telegraph wire.

The high-voltage current can not be taken into use directly for various reasons, the principal of which is the danger to life. By

means of transformers it is rendered harmless, and the low-voltage current is distributed about the farm by means of a special net of conductors. It depends on the extent of the electrical installation whether the secondary net of conductors supplies the farmyard only or the adjoining fields as well.

A transformer is inclosed in a city street booth similar to the advertising columns used in Berlin; the conductors go out from this booth, and electrical junction boxes are installed on the buildings of the farmyard as well as on numbers of poles in the fields. These junction boxes are similar to those used in connection with the electrical installment in dwellings, etc., where the conducting wire of lamps may be joined to the electric battery by means of contact connections. The junction boxes used on the farm are, of course, much larger and must be weatherproof, and the connecting wire, instead of being a fine insulated one, as used in dwellings, must be a strong, pliable cable from 50 to 100 yards long and which may be rolled on a reel as with a garden hose. With the junction boxes and such a cable we are able to reach nearly every spot in the farmyard and the greater part of the fields.

ADAPTABILITY OF MOTORS.

Having arranged for the delivery of the current to the desired locations, the next thing to consider is the motor. Its size will depend upon the amount of work to be done, but in all cases the motor must be portable. With a hand litter two persons can easily carry a motor which will be used in various places in the farmyard to drive small machines for house or yard work; it can be easily connected to such machines as chaff cutters, oil-cake breakers, draining pumps, corn shellers, grinders, etc. A good manager will use the motor to the greatest advantage in work of this kind.

The farm work in general lasts for only a few months of the year, and for this reason the motors are not permanently connected and may be used throughout the year for all kinds of work, thus deriving the largest possible returns for the money invested. Sketches are forwarded showing a portable motor running a mill for breaking oil cakes and the same motor used in connection with a pump to drain water from swampy ground. [These and other pictures illustrating the subject forwarded by the consul may be seen at the Bureau of Manufactures.]

Large motors for transfer must be put on wheels. By using belts, this motor can be used for all possible work and especially with thrashing machines. There are electrical thrashing machines in use where the motor is permanently connected with the machine. A number of such machines are in successful operation. Barns are equipped with electrical cranes lifting an entire load of hay at once and placing it in the loft at any desired place. Such an installation means the saving of numbers of farm hands.

Some large farms use electric cars. The electric railroad of the great Dahlwitz farm, which for ten years has forwarded large quantities of farm products to the markets of Berlin and vicinity, may be cited, proving that electricity in agriculture is not a toy or experiment, but of genuine profit in farm work. The use of electricity in agriculture develops slowly and has come much later than in other

branches of human activity, but it will conquer one field of agricultural work after another.

COST PER KILOWATT.

In response to an inquiry from this consulate, Mr. von Podbielski offers the following suggestions:

If even a very small profit is to be derived from agricultural work, the farmer is bound to use machinery instead of day labor, because the wages for the latter are steadily increasing. Electricity is the power wanted and is the best adapted to the work. Electricity is always at hand when the proper conductors are provided. Until very lately it could not be used extensively on account of the great price for the kilowatt-hour, charges of from 40 to 60 pfennigs (\$0.0952 to \$0.1428) for the kilowatt-hour excluding its use for agricultural purposes. According to my calculations the price for the kilowatt-hour in Germany, in order to leave a reasonable profit, should be no more than 20 pfennigs (\$0.0476); and if installations, already in existence, of turbines are employed it is possible to furnish electricity at such a price. At our coal centers the kilowatt-hour is already furnished at from 6 to 7 pfennigs (\$0.014 to \$0.0166).

The use of electricity in agricultural work may be classified as follows: (1) About the barnyard as working the chaff cutter, corn cleaner, bruising mill, hauling crane, etc., unloading of hay, and, on large farms, smithy and cartwright work, and, further, for lighting the stables and the houses; and (2) in the fields, pulling the plow, running the machines, reapers, etc., and thrashing.

There is no difficulty in installing the machines referred to in the farmyard, but the expense for the use of electricity in the fields is much too high as yet. The strong conductors and cables are too expensive, and the plow run by electricity does not as yet work satisfactorily. I feel sure that electrical centers will soon be installed in the country, and that the electrical force thus provided will be employed first of all for agricultural work.

BRITISH HOP REPORT.

FINDINGS OF PARLIAMENTARY COMMITTEE ARE REASSURING.

Consul-General Robert J. Wynne forwards an abstract from the London Daily Telegraph dealing with the report of the committee on the British hop industry, a part of which follows:

The conclusion of the House of Commons select committee on the hop industry is that the general conditions are less serious than has been alleged, and that no special measures directed against the importation of foreign hops are called for. The committee reviews at length the evidence submitted by the 42 witnesses examined, but on only one or two points do they commit themselves to a definite recommendation. Perhaps the most notable suggestion is that the use of hop substitutes should be prohibited by law.

The average annual consumption of hops in this country has in recent years been about 600,000 hundredweights. Roughly speaking, the committee finds that of this quantity rather more than two-thirds is supplied by this country and one-third from abroad. While the average annual acreage under hops has been reduced in the last decade by 13 per cent, the average annual yield per acre has increased 14 per cent. The decreased acreage has, in fact, been balanced by the increased yield.

Dealing with the position of hop growing abroad, the committee states that attention was specially directed to large consignments of Pacific coast hops in the spring of this year, and in particular to a cargo of hops of 1906 growth. The importations of hops from abroad for the six months ending February, 1908, were 142,541 hundredweights, compared with 166,991 hundredweights during the corresponding period in the preceding year. During the months of March and April, however, owing to phenomenal shipments from America of some 84,000 hundredweights, chiefly old hops, the imports for the current year have been exceptionally inflated.

CONSUL WILLIAM W. CANADA states that the Mexican city of Vera Cruz has been for several years a good field for moving picture shows, but, being no longer a novelty, they are not as well patronized.

SOUTH MANCHURIA RAILWAY.

NEW AMERICAN ROLLING STOCK IN USE THROUGHOUT THE LINE.

The following information concerning the standardizing of the South Manchuria Railway, the introduction of American rolling stock thereon, with the benefits which are expected to result, is furnished by Consul Roger S. Greene, of Dalny:

As previously reported, it was decided to defer using the standard gage material on the South Manchuria Railway until the whole line was standardized. This work was finished in May, and during the five days from the 22d to the 26th the new American rolling stock was substituted for the old along the whole line, beginning from the north. The service is now being regularly maintained, on a slightly altered schedule, with the new material. The change was effected without interrupting the passenger service, and it was only necessary to suspend through freight shipments for about a fortnight, which was done without great inconvenience, as the busy freight season is now practically over. The old rolling stock will gradually be returned to the Japanese railways from which it was taken during the war.

The new equipment set up, tested, and ready for service at the time the change was effected was as follows: Locomotives, 121; combination first and second class passenger cars, 10; second-class passenger cars, 44; third-class passenger cars (temporary), 10; mail and baggage cars, 15; box cars, 453; gondola cars, 650; flat cars, 197; cabooses, 100; water-tank cars, 3.

There will be no regular first-class passenger cars until the end of the summer, and possibly no sleeping cars till well into the fall, but a temporary first class has been arranged with chairs, which is attached to the one through train that is now run each day, leaving Dalny at 7 in the evening and Kwanchengtzu at 7.55 in the morning. The new second class really corresponds to the old third class, and the new third class to the old fourth class, consisting of box cars without seats for the coolie traffic, the fares remaining approximately the same for short distances. For long distances fares have been raised slightly, as they are now based on fixed rates per mile, whereas formerly the long journeys were made relatively cheaper. The passenger mileage rates are as follows, per mile: First class, 6.075 sen (3.025 cents); second class 2.7 sen (1.345 cents); third class, 1.8 sen (.896 cent).

Already it is found that great economy will result from the broader gage, and accordingly a new freight tariff is shortly to be issued which is expected to do much to encourage trade.

PROPOSED SERVICE WITH SHANGHAI.

The time remains practically unchanged, and it is not expected that any faster trains will be run before next year. Much better connections than before are now made with the steamers running between here and Japan, and the railway company is, moreover, negotiating with the Nippon Yusen Kaisha for the opening of a weekly service between this port and Shanghai with a first-class passenger steamer.

This may not only help to attract the European passenger traffic to this route, by offering a reduction in time of more than two days, compared with the Vladivostok route, but, what is far more im-

portant, it may encourage Chinese and foreign trade by affording regular and prompt freight connections with that important depot. Hitherto steamers have come from Shanghai only very irregularly, as the volume of business has not been sufficient to make a regular service attractive to unaided private enterprise.

If Dalny is made the most convenient port of entry for Manchuria, as such connections will help to make it, a solid foundation for future growth will have been laid, and buyers and sellers will come here in greater numbers. [Copies of time-table and fare schedules of the Manchuria Southern Railway and a chart of Darien Wan, Kwangtung Peninsula are on file in the Bureau of Manufactures.]

SANTO DOMINGO MARKETS.

OFFER OPENINGS FOR MANY ARTICLES OF AMERICAN MANUFACTURE.

In response to a letter of inquiry from a Tennessee manufacturer Vice-Consul Lithgow, of Puerto Plata, makes the following suggestions regarding the sale of certain articles of American manufacture in the Dominican Republic:

Household and office furniture is generally imported from the United States. However, considerable willow furniture comes from Vienna. Refrigerators are brought from the United States, but their sale has not been pushed. There is no need of heating apparatus here. The people cook with small charcoal stoves. Each stove holds one pot. If a bright traveling agent would come and introduce wood-burning ranges, teaching the people how to use them, it would be possible to sell quite a number.

Iron beds and springs are imported from the United States, Germany, and England. There is a good trade in them. Such articles as bath tubs, lavatories, kitchen sinks, and soil pipe are not generally used, but there is a good field here if properly introduced.

Agricultural implements are generally brought from the United States, with the exception of machetes and some hoes coming from Europe. Sawmills and woodworking machinery could also be sold here in a limited quantity. Boilers, engines, and tanks are imported in small numbers. For mining and sugar-cane cars there is a very small demand. Corrugated iron is used here for roofing, but it comes from England and Germany. The sizes of sheets used are 6 by 2½ feet and 3 by 2½ feet. The first weight mentioned runs 7 sheets to a hundredweight and the small size 18 and 20 sheets to a hundredweight. I think cornices, metal shingles, and steel ceilings, not now known here, could be introduced. Saddlery hardware should be a good article for import. Proprietary medicines and pharmaceutical preparations are imported in considerable quantities. Bituminous coal is only imported by the Central Dominican Railroad.

The declared value of imports through this port for 1907 was \$1,617,651 and the value of exports \$2,072,631. All catalogues sent to this country should be in Spanish. Orders of the merchants here are sent through New York commission merchants. [Names of the principal importers and of sugar plantation proprietors of the Puerto Plata consular district are on file in the Bureau of Manufactures.]

CHINESE TRADE OPPORTUNITIES.

GERMANS AND JAPANESE ACTIVE—MARKET FOR AMERICAN GOODS.

Consul J. C. McNally, of Nanking, notes the decline of American trade along the Yangtse River Valley, and alludes to the trade opportunities at Nanking as a result of the advent of the Shanghai-Nanking Railway. He says:

The latter part of 1907 and the early months of the present year have not been prolific of industrial or commercial activity within the consular district of Nanking. British trade in the Yangtse Valley is being lessened by the energetic competition of the Germans and the Japanese. In marketing their wares American business men are greatly handicapped. British, German, French, Japanese, and Chinese flags float from numerous boats plying the river from Shanghai to Hankow. The heavy draft ocean freighters of these same nations frequent the port of Shanghai.

AMERICAN SHIPPING—RAILWAY STIMULUS.

On the other hand, the American flag is rarely seen on this river, where American shipping not many years ago was in close competition with that of England. The only thing left the American exporter is to establish a distributing depot at Shanghai, to which port the cities in the Yangtse Valley are tributary in matters of commerce, and have his goods distributed by carriers of other nations.

The new Shanghai-Nanking Railway will stimulate trade at the latter place, especially on account of closer communication and better freight rates. The officials of Nanking have under contemplation the establishment of small manufacturing plants. Already the native shoemaker, with a commendable power of imitation, turns out a good and cheap shoe, the chief drawback to his business being the poor quality of material used.

With the advent of the railroad many tourists are coming to Nanking and the costume of the westerner is pleasing to an ever-increasing number of the rising generation. American shoes and haberdashery especially appeal to them. They are also fond of horseback riding and bicycling, and the American saddle is a favorite. Staple American goods here are flour, condiments, canned meats, fruits, and vegetables. It, however, frequently happens that bright, tasty labels of British canned goods influence sales against the poorly labeled American goods.

EUROPEAN BUSINESS METHODS.

The increasing sales in local markets of European articles is due to the zeal of representatives in ascertaining what particular article appeals to the native merchant, and a willingness to cater to local trade demands.

To introduce goods into China without having a knowledge of the special wants of the natives is a hazardous undertaking. Representatives of British, German, French, and Japanese firms traverse the Yangtze Valley prepared to fill orders, however small, at an insignificant profit, trusting to do better later on. This system brings before the people the nature and quality of their goods, and

enables them at the same time to investigate the possibilities of the market.

It must not be forgotten that the Chinese are usually suspicious of the business methods of the foreigner, and a certain confidence must be cultivated before they will enter into an important business arrangement. The European representatives are aware of this condition, and first visit the prospective buyer to gain his confidence without any hope of making a sale.

A German representative of a noted Cologne machine tool firm has spent eight months in China on a tour of investigation as to the possibility of introducing the firm's goods into the Chinese markets. He has gained a fund of valuable information as to the character of the local merchants, the manner of doing business, the nature and quality of the goods wanted, shipping facilities, and the financial reliability of the person selected to handle the goods.

The object of these representatives is to gain a thorough knowledge of conditions, so that when the demand comes they can conduct their business intelligently.

The markets for cotton goods at the principal ports seem to be glutted, and the present outlook in that line is not encouraging. The leading importers say that heretofore the foreign dealers were content to supply only distributing houses in the principal ports, but that lately they have undertaken to supply the smaller interior dealers direct, thereby closing a usual channel of distribution.

CONSULAR AND TRADE NOTES.

According to the American Agriculturist Prof. Clinton D. Smith has left the Michigan College and Experiment Station to go to Piracicaba, Brazil, to organize, equip, and direct, as president, the first agricultural college in Brazil.

Consul J. N. McCunn sends from Glasgow a detailed description and illustration of a small machine invented in Scotland for inking and re-dressing typewriter and similar ribbons. These are filed for inspection at the Bureau of Manufactures.

Consul J. N. McCunn, of Glasgow, states that the introduction of safety razors in Scotland was slow, but that now they are quite popular. The American article leads, as it is conceded that manufacturers of the United States are unequalled in the tempering of thin-blade steel.

The 2,250,000 tons of coal imported annually by Argentina from the United Kingdom is spoken of by the British consul at Buenos Aires as an important item. Suggestions have been made by returned American travelers that the coal operators of the United States could also secure orders from the River Plata.

The statistics of exportations from the United States to Germany for the fiscal year ending June 30, 1908, show a value of \$276,910,223, against \$256,595,663 in 1907. The increase in raw cotton was \$13,955,443 and of wheat \$6,081,974. The imports from Germany for the fiscal year 1908 aggregated \$142,935,547, against \$161,543,556 in 1907.

CENSUS OF BRITISH PRODUCTION.

STATISTICS OF THE VOLUME AND VALUE OF THE HOME TRADE.

Consul Albert Halstead, of Birmingham, reports as follows concerning the census of British production now being taken by the Government:

Manufacturers in the Birmingham district are now receiving schedules from the British Board of Trade in connection with the census of production for the year 1907, which is now being taken for the British Government. The purpose of this census is to secure accurate information and a fuller knowledge of the volume and value of home trade, which information it is evident will be of the greatest value. The particular Birmingham industries in regard to which statistics are requested are those connected with the brass, leather, engineering and electrical engineering trades. For the information of Americans it is desirable to state that the word "engineering" as used in the United Kingdom refers to all kinds of machinery, including automobiles, gas engines, locomotive engines, lathes, railway cars, etc.

The following are the questions asked of the manufacturers (in this case brass founders and manufacturers):

(1) Main line of business carried on by the establishment; (2) year of return; (3) output in the year of return, showing value of work done and cost of labor and materials expended on construction and repair work executed by firm's work people on their own buildings, machinery, and plant; (4) the estimated aggregate cost of purchased materials and stores used in the year of return; (5) the estimated aggregate amount payable to other firms for work given to them the value of which is included under output in answer to question 3; (6) number of persons employed in year of return; (7) days worked in the year of return; (8) (a) capacity of engines owned, (b) amount of electricity used in year of return, and voluntary information; (9) fuel consumed in year of return.

GUARDING TRADE SECRETS.

This census is being taken under the census act, which requires the board of trade "to have due regard to the circumstances of various trades and industries and in particular to the importance of avoiding the disclosure in any return of any trade secret, or of trading profits, or of any other information the disclosure of which would be likely to tend to the prejudice of the person making the return."

The British manufacturer is generally averse to furnishing information in regard to his business, being apprehensive lest trade secrets may be discovered. This apprehension was one of the objections raised by manufacturers. The greatest care has been taken, however, to prevent the discovery by the public of trade secrets, and no particulars as to any individual establishment are to be disclosed. The law imposes a penalty of two years' imprisonment with or without hard labor, or a fine, or both fine and imprisonment, upon any person who improperly discloses the information thus obtained. In order to more surely protect individual firms from the disclosure of their private business the first leaf of the schedule, which is the only one on which the name of the firm will appear, has been perforated, and as soon as the schedule is returned to the board of trade this leaf is to be detached by a responsible officer, and the other pages only,

which contain no indication as to the source of information, will be dealt with by the clerk engaged in the work of compilation.

In view of possible technical difficulties and trade peculiarities the board of trade has established advisory committees for consultation in the preparation of the trade schedule and the instructions for filling it up. In consequence the results of the census should be exceedingly accurate and show the amount of the whole production of the industries of Great Britain for the year. After the next census and later ones have been taken the census returns will be of the greatest use for comparative purposes in showing the course of trade.

GERMAN MACHINE EXPORT.

ACTIVITY OF MANUFACTURERS IN EXTENDING FOREIGN MARKETS.

In stating that the German machine industry has been pushing its exports during the present year to a surprising extent Vice-Consul James L. A. Burrell, of Magdeburg, has compiled the following statistics:

In the first five months of 1908, 1,420,388 double centners (312,485,360 pounds) were exported, as opposed to 1,277,753 double centners (281,105,660 pounds) during the same period in 1907, showing an increase of 142,635 double centners (31,379,700 pounds), or more than 11 per cent. Not all branches of the industry have shared in this increase; for some it has been impossible to export more than last year. The principal increase has been in the export of steam machines of all sorts, including locomotives, locomobiles, and machines for working metals.

In the first five months of 1908, as compared with the same period of 1907, the exports in the most important groups were in double centners (1 double centner = 220 pounds), as follows:

	1907.	1908.		1907.	1908.
Steam locomotives.....	138,085	167,317	Machines for printing, book-binding, etc.....	60,283	53,490
Steam locomobiles.....	34,228	36,762	Machines for working products of mines.....	55,606	51,459
Other steam machines.....	134,407	207,185	Sewing machines.....	74,118	74,785
Machines for working metals.....	187,977	194,864			
Machines for milling and the sugar industry.....	70,664	67,357			

The increase in steam engines and in machines for working metals was so large that it compensated for the decrease in other machinery. An increase is further shown in the exports of weaving looms, machines for wood working, thrashing machines, and lawn mowers.

Prosperous Asparagus Season in British District.

Consul Albert Halstead, of Birmingham, writes that in the great vegetable and fruit growing vale of Evesham, England, almost 3,000 acres are devoted to the cultivation of asparagus. The season of 1908 recently ended, and, though the cold spring cut short the yield by one-third, it was quite prosperous, the average price for a bundle of 120 sticks of ordinary asparagus being 36 cents. The crop for this year was never exceeded in quality. The highest grade of asparagus brought high prices, some selling in the midst of the season for \$2.18 a bundle.

WORLD'S HOP PRODUCTION.

HEAVY INCREASE IN YIELD LAST YEAR IN EUROPE.

The following summary of hop production for 1907 is taken by Consul H. W. Harris from the annual report of the Nuremberg Chamber of Commerce:

The report states that the harvest in Germany was one of the best as to amount and quality during the past twenty years. The following figures are given as showing approximately the hop harvest of the principal hop-growing states and countries for the year 1907. The amounts are given in metric tons of 2,204.6 pounds.

	1907.	1906.		1907.	1906.
	Tons.	Tons.		Tons.	Tons.
Bavaria.....	13,560	12,500	Russia.....	3,500	3,000
Wurttemberg.....	3,100	2,750	Belgium and Holland.....	2,500	2,500
Baden.....	1,600	1,500	France.....	4,000	2,750
Alsace.....	4,500	3,750	England.....	19,000	14,000
Prussia.....	900	1,250	United States.....	31,000	34,500
			Australia.....	750	750
All Germany.....	23,650	21,750			
Austria.....	15,600	8,850	World's harvest.....	100,000	88,100

GERMANY'S FOREIGN TRADE—NUREMBERG MARKET.

For the five months from September 1, 1907, to January, 1908, Germany's imports of foreign hops is stated at 2,789 metric tons, as against 1,169 metric tons for the corresponding five months of 1906-7. Her exports of hops for the five months ending January 31, 1908, were 7,580 tons, as against 7,682 tons for the five months ending January 31, 1907. The report referred to states that at least one-half the German crop was exported, netting an income of about 22,000,000 marks (\$5,250,000), while the total imports amounted to somewhat less than \$1,000,000 worth.

Among Germany's foreign customers for hops in 1907 England ranked first and the United States second. Among other countries buying German hops in considerable quantities were the Netherlands, Switzerland, Sweden, Russia, Austria-Hungary, and Denmark.

The trade in hops in the Nuremberg market for six months ended with February, 1908, amounted to 71,500 tons. The following average prices per centner of 110 pounds for hops of various grades at the Nuremberg market are given for the six months beginning September 1, 1907, and ending February 29, 1908: Markthopfen, \$5.95 to \$13.80; Gebirgshopfen, \$10.71 to \$16.18; Aischgründer, \$10.71 to \$16.18; Hallertauer, without seal, \$11.42 to \$18.56, with seal, \$14.99 to \$21.42; Spalterland, \$16.66 to \$21.42.

New Steamship Service to Morocco.

Vice-Consul-General George E. Holt, of Tangier, states that the British and African Steam Navigation Company (Limited), of London, England, has inaugurated a new fortnightly steamship service with Morocco. This new line of steamers will operate between London and Morocco ports via Canary Islands, carrying both passengers and freight. The first steamer of the new service, the Bakana, arrived at Tangier on June 17.

ITALIAN FOREIGN TRADE.

DECLINE SHOWN THIS YEAR—HEAVY AMERICAN COMMERCE.

Consul D. R. Birch reports from Genoa that the foreign trade of Italy during the first three months of the present year decreased by \$13,832,147 in comparison with the business for the same months of 1907. These figures are reflective of less movement in both imports and exports. The following table shows figures for the first three months of 1908, with the gains or losses, compared with the same period of the previous year.

Articles.	Imports.		Exports.	
	Value.	Gain (+) or loss (-).	Value.	Gain (+) or loss (-).
Spirits, beverages, and oils	\$2,715,640	+ \$613,685	\$6,660,872	+ \$206,863
Coffee, tobacco, and spices	2,347,316	-- 499,825	243,318	-- 104,363
Chemical products, medicinals, resin, and perfumery	6,450,118	+ 799,706	3,176,018	-- 99,964
Dyeing and tanning extracts	1,849,925	+ 81,754	298,207	-- 104,380
Cotton	19,342,094	+ 610,573	4,813,514	-- 2,065,908
Hemp, jute, flax, etc.	2,778,684	+ 90,708	4,376,310	+ 517,020
Wool, horse hair, and other hair	7,998,787	+ 588,651	1,189,225	-- 455,615
Silk	9,106,864	-- 3,705,568	27,253,558	-- 5,411,568
Lumber	6,636,609	+ 1,629,637	2,617,759	-- 345,585
Paper	2,316,486	-- 21,625	1,125,811	+ 12,951
Skins	3,924,469	-- 1,284,358	2,213,390	+ 260,688
Mineral ore, metal, and metal works	33,078,604	+ 2,589,698	2,545,185	+ 534,312
Vehicles	3,466,363	+ 1,748,495	1,330,968	+ 568,114
Stones, porcelain, and glasswares	15,556,949	-- 98,949	4,241,919	+ 199,240
Rubber and gutta-percha	1,552,350	+ 257,577	427,962	+ 131,927
Wheat, flour, pastes, and vegetable products	9,166,371	-- 8,282,696	12,206,004	+ 1,178,004
Animals and animal products	8,660,387	+ 1,168,136	8,666,715	+ 302,361
Other and various unnamed merchandise	1,770,402	+ 113,662	2,258,690	-- 432,069
Total general merchandise	138,712,418	-- 3,600,739	85,594,915	-- 5,123,925
Precious metals	965,041	-- 5,165,645	485,549	+ 288,162
Total	139,667,459	-- 8,766,384	86,080,464	-- 4,885,763

IMPORTANT TRAFFIC WITH UNITED STATES.

Germany maintains the lead in the volume of business done by Italy with other nations, and the end of the first quarter of the year finds the United States pushing Great Britain closely for second place. The value of the import and export trade of Italy with the three countries from January 1 to March 31, 1908, is as follows:

Country.	Imports.	Exports.	Total.
United States	\$22,493,571	\$9,308,776	\$31,802,347
Germany	25,476,579	10,936,969	36,412,538
Great Britain	25,707,021	7,135,210	32,842,231

In detail the imports from the United States is shown by the following classifications:

Articles.	Value.	Articles.	Value.
Cotton oil	\$176,788	Automobiles	\$23,160
Mineral oils (resin and tar)	9 6,387	Phosphate mineral	188,561
Tobacco	266,538	Mineral, unmetallic	69,068
Sulphate of copper	7,527	Coal	43,425
Paraffin, solid	227,354	Rubber and gutta-percha	25,862
Chemical products, medicinals	194,351	Wheat	1,763,827
Cotton	12,531,876	Salted meats	490,027
Lumber	591,159	Fish	419,008
Staves	131,047	Lard	214,428
Leather	74,112	Other grease	363,806
Copper, brass, and bronze	2,082,856	Notions	14,282
Lead	115,622	Other articles	693,256
Machines and parts of	615,863		
Scientific instruments	173,507		
		Total	22,493,571

The exports from Italy to the United States from January 1 to March 31, 1908, were as follows:

Articles.	Value.	Articles.	Value.
Wine	\$250,321	Gloves and shoes	\$19,879
Olive oil	644,813	Tanned leather	6,562
Essences	346,049	Machines	4,068
Citrate of lime	215,967	Automobiles	152,084
Tartar, crude	110,975	Marble	162,506
Chemical products, resin, and per- fumery	187,403	Sulphur	61,374
Tanning	51,338	Flour and macaroni	746,138
Hemp	352,082	Oranges and lemons	292,009
Hemp fabric	47,671	Dried fruits	154,786
Cotton fabric	117,344	Preserved fruits	82,411
Wool and wool waste	20,844	Tomato paste	176,402
Horse hair	20,265	Cheese	895,650
Silk waste and threads	3,041,101	Human hair	92,254
Silk goods	130,468	Coral	38,582
Other silk fabric	5,018	Notions	4,246
Furniture	51,338	Hats	827,714
Straw braids	49,967	Objects of art	56,391
Paper	63,497	Other articles	727,224
Skins	108,080	Total	9,308,776

GERMANY'S CIGARETTE IMPORTS.

INCREASING RECEIPT OF FOREIGN GOODS DISTURBS MANUFACTURERS.

Vice-Consul James L. A. Burrell, of Magdeburg, reports that at the last general convention of representatives of the German cigarette industry the increasing importations of foreign cigarettes were considered, in particular the danger of the continually increasing imports of Austrian Regie cigarettes for the German industry. He explains the situation thus:

On July 1, 1906, the duty on cigarettes was raised from 270 marks (\$64.26) to 700 marks (\$166.60), which increase, high though it was, lessened the importation of foreign cigarettes for a short time only. At present more than 60 per cent of the imports are from Austria-Hungary, while ten years ago hardly any cigarettes were imported from those countries. These cigarettes are not, as might be supposed, of the highest quality, but are principally of medium grade. Against this importation the increase in duty has had no effect whatever. The importations from England, which consist almost exclusively of the expensive varieties, have been steadily increasing for some years and have recently reached the volume of the importations from Russia. The market for cigarettes of German manufacture is, naturally, being restricted by the increasing imports and the German manufacturers are advocating a still higher duty on foreign cigarettes.

Suez Canal Traffic.

In the statistics of the Suez Canal for 1907 the passage is recorded of 9 American vessels with a total tonnage of 12,537, while there were 2,651 British vessels of 9,495,868 net tons, 580 German vessels of 2,253,651 tons, 239 French vessels of 806,786 tons, 223 Dutch of 632,089 tons, 67 Japanese of 259,059 tons, 81 Russian of 239,350 tons, and 86 Italian of 202,112 tons. The total for the year was 4,267 vessels with a tonnage of 14,728,434. The increase of business at Suez for 1907 was 292 ships and 1,282,930 tonnage, very nearly all of which was British.

VALENCIA RAISIN CROP.**GOOD YIELD REPORTED—STOCKS, FREIGHTS, AND PRICES.**

Consul Charles S. Winans advises that the prospects for the coming Spanish raisin crop in the Valencia district point to fine quality and a total yield of 30,000 tons, which is some 4,000 tons above the average of recent years. The consul's details, bearing date of July 6, follow:

The flowering of the vines took place under excellent weather conditions, and although the critical period for muscatel grapes is not yet past, no heat waves, so prejudicial to the fruit at this season, have been reported up to the present.

Stocks in the hands of farmers and speculators in this country are now totally cleared, while latest advices from London, where the most important stocks of old raisins are always held, report 6,700 hundredweights Denias and 180 hundredweights Malagas on hand, against 3,380 of the former and 100 of the latter at same period last year.

Freights, as far as can be ascertained at present, are likely to rule at usual rates of 25 shillings a ton for principal United States Atlantic ports, both by direct steamers and via Liverpool in transshipment.

The price obtained by growers last season for raisins in bulk delivered in packing stores of speculators and export merchants averaged about \$2.55 per hundredweight of 112 pounds. [The exports of raisins from Valencia were \$1,500,000 in 1906, of which \$50,668 worth were declared shipments to the United States; the latter increased in 1907 to \$205,152, according to the consul's annual report.—B. of M.]

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COMMERCIAL TRAVELERS.

CHILE.

[FROM OFFICIAL REPORTS OF THE REPUBLIC OF CHILE.]

Commercial travelers are admitted to Chile without any restrictions, and may travel and do business without special permission or license.

Samples of merchandise may be admitted to the country without the necessity of immediate payment of customs duties, provided these samples do not consist of entire pieces of fabrics or complete sets of articles which would take from them the character of samples. Duties must be eventually paid on the goods if they remain more than six months in Chile. If within six months they are shipped to another port of the Republic or to a foreign port no duties need be paid. In lieu of the payment of the duties at the time of disembarkation a note is given to the custom-house for the amount due, according to the tariff law, payable in six months' time. If the samples do not leave the port within six months the customs officials of that port proceed to collect on the note.

CHINA.

[FROM REPORTS OF MINISTER W. W. ROCKHILL AND CONSUL W. T. GRACEY.]

Neither the Chinese Government nor the imperial maritime customs have any regulations affecting commercial travelers as a special class. In entering the country and traveling therein they are subject to the ordinary governmental and customs restrictions governing all foreign travelers, and are not required to pay special license fees or taxes for the exercise of their profession.

As to samples of merchandise, the inspectorate-general of customs of China states that the rule is to admit samples and musters of goods in reasonable quantities and not for sale free of duty. The inspectorate-general further explains that this rule is generally read as liberally as the circumstances in individual cases permit, but that a distinction is made in practice between a "sample" and a "specimen," meaning by the latter samples having an intrinsic value of their own. For example, a few yards of various kinds of cloth would be admitted free as "samples," but a locomotive or a case of sample watches would be considered "specimens" and some means would be taken to secure the duties on them in case of their sale for actual use.

The usual procedure in the latter case is to require the payment of duty, while the traveler makes a declaration that the goods are to be reexported. When the reexportation takes place a drawback certificate is issued by the customs authorities for the amount of duty paid, which can be cashed at the customs bank or used at par in future payments to the custom-house.

COLOMBIA.

[FROM REPORTS OF CHARGE D'AFFAIRES WM. HEIMKE AND CONSUL-GENERAL JAY WHITE.]

Commercial travelers are not required to pay any license fee or tax in order to do business in Colombia. While no licenses are required, all travelers on arrival in the country must present a passport from their home government, viséed by the Colombian minister or consul accredited to the country or port of embarkation.

Samples in small parts of no commercial value and not exceeding 25 kilos in total weight are admitted free of duty. If in excess of that weight they are subject to duty, unless reexported within twelve months. It is customary for the commercial traveler to give a bond to the customs authorities for the amount of duty due, which is canceled at the time of the reexportation of the samples within twelve months from the date of their importation. Upon the expiration of that period duty must be paid on all samples still remaining in the country.

Passengers' baggage, up to the weight of 150 kilos (330.69 pounds) per person, is admitted free of duty, provided it is clearly apparent that the goods are for their personal use, and are presented by the traveler in person at the custom-house on entry into the country. Any excess of said weight, not accompanied by a consular invoice, is dutiable as the most highly taxed class in the tariff.

Consul-General White has the following to say on the subject of transportation:

At present and until transportation facilities are much changed and improved, all perishable goods destined for the interior of the country should be so packed as to exclude moisture, and in bundles not exceeding 125 pounds in weight, for convenient transportation on mule back, by peons, or in canoes.

All merchandise that is transported via the Magdalena River is subject to a temperature of at least 100° Fahrenheit for a period of about ten days, and articles, such as photographic films, pharmaceutical preparations, etc., are often ruined through insufficient or negligent packing. Goods destined for the interior are exposed to the downpour of tropical rains and may accidentally be submerged in crossing mountain streams or in careless handling in canoes. Merchandise may now be forwarded from the Magdalena River to Bogota via the Cambao Cart-Road, but even by this route there is no assurance that it will not be damaged by water.

CONGO FREE STATE.

[FROM REPORT OF CONSUL-GENERAL JAMES A. SMITH, AND OFFICIAL DOCUMENTS.]

An annual personal tax of 150 francs (\$28.95) is imposed on each commercial traveler unless he, or the house he represents, have al-

ready been subjected by the State to the payment of direct or personal taxes. This latter provision would appear to affect only commercial travelers residing in the State and paying taxes therein or those representing commercial houses established in the State.

Upon payment of the tax the traveler obtains a license authorizing him to engage in his business in the State. The license must always be carried along, ready to be produced on demand of the authorities. It must also be presented at the frontier points, both on leaving and entering the country and viséed by the proper officers, a fee of 5 francs (about \$1) being charged for each visé.

Attempts to evade these provisions are punishable by a fine of 50 to 200 francs or imprisonment not exceeding seven days, or both.

ADMISSION OF SAMPLES.

Samples of merchandise can be entered under the customs regulations as merchandise intended for reexportation, and, as such, are not subject to duty. A bond for the amount of duty which would be exacted if the samples were entered for consumption must, however, be provided. This, in accordance with the present tariff laws, amounts to 10 per cent ad valorem.

COSTA RICA.

[FROM REPORT OF CONSUL J. C. CALDWELL.]

Commercial travelers desiring to open a sample room for exhibiting goods must obtain a license from the municipal authority of the town where the exhibit is to be made.

Samples are subject to payment of duty at the time of importation, but if a declaration is made to the effect that they are to be reexported a certificate is issued which entitles the traveler to a refund of the duties on the samples reexported within a period of three months from the date of importation. The wharfage and theater dues, amounting to seven-tenths of a cent (United States) per kilogram, are not refunded. Instead of paying duty in cash a satisfactory bond for the amount due may be given to the customs officials, who will cancel it if exportation takes place within the legal period. If the samples are not reexported within three months, duty must be paid.

CUBA.

[FROM REPORT OF A. C. TURNER, CHARGÉ D'AFFAIRES AT HABANA, AND OFFICIAL DOCUMENTS.]

Commercial travelers on entering Cuba are treated in the same manner as ordinary travelers, and at present are not required to pay a license fee in any of the provinces.

Under the Spanish régime the general Government required a license fee and gave authority to commercial travelers to transact business. This regulation was repealed under the first intervention and the matter turned over to the different municipal councils. Under this system each municipal council could fix the fee to be charged and authorize the grantees to transact business for one month, when the fee was to be renewed. This, however, imposed an unnecessary hardship on the commercial traveler, and as a matter of

fact now no fee is charged or collected, although there has been no repeal of the regulation.

ADMISSION OF SAMPLES.

The following sections of the customs tariff of Cuba provide for the free admission of certain samples:

§ 326. Samples of felt, wall paper, and tissues when they comply with the following conditions:

(a) When they do not exceed 40 centimeters in length, measured in the warp or length of the piece, even when such samples have the entire width of the piece. The width shall, for tissues, be determined by the list, and for felts and wall paper by the narrow border which has not passed through the press.

(b) Samples not having these indications shall only be admitted free of duty when they do not exceed 40 centimeters in any dimension.

(c) In order to avoid abuse, the samples declared for free entry must have cuts at every 20 centimeters of their width, so as to render them unfit for any other purpose.

§ 327. Samples of trimmings in small pieces of no commercial value or possible application.

In the case of other samples only a partial remission of the duty is provided for in the following note to section 327 of the tariff:

NOTE.—No other samples than those provided for in §326 and §327 are admitted free of duty; provided that ordinary and usual commercial samples, imported by bona fide commercial travelers in their baggage, after examination and identification by the custom-house, upon reexportation within three months after the date of their importation, are entitled to a refund of 75 per cent of the duties paid thereon. If upon presentation at the custom-house for reexportation said samples shall be positively recognized and identified as being those upon which duty has been paid, and provided further that the appraised value of said samples shall not exceed \$500.

DENMARK.

[LAW OF JUNE 8, 1839; ALSO BRITISH AND AUSTRIAN REPORTS.]

Traveling agents are required to pay an annual trade tax of 160 krone (\$42.88) in Denmark. In case the agent represents several houses, he is required to pay the above full amount for the first house and half that sum for each of the other houses. The date of the payment of the tax is counted as the first day of the year. Payment must be made at the first custom-house at which the agent arrives. In the way of papers, the agent must produce either an attest from his home government officials, giving his name and that of the firm which he represents, or a power of attorney issued by his firm and certified to by some notary public as well as by a Danish consul.

It is well to bear in mind that the legalization of the signature to the power of attorney by some consul of the agent's country residing in Denmark is insufficient. The receipt issued to the agent by the customs officials on payment of the tax must be viséed by the local police authorities before such agent is entitled to conduct his business. A similar visé must be obtained from the police department of every city in which business is done.

The above-named papers may not be made out in the name of a firm in such a way as to enable different members to use the same, but must be made out to one specific person. In cases where a house is compelled to change its traveling agents in the course of the year, the proper transfer of the trade license to the new representative is made by the Danish officials free of charge. On the other hand, a retransfer of the license to the original bearer is not permissible.

Failure to procure a license before engaging in business is punishable by a fine of 16 krone (\$4.29), which is increased to 64 krone (\$17.15) in case of a repetition of the offense, besides making the offender liable to expulsion from the country.

Traveling agents may do business only in Copenhagen and in such other Danish cities as are included in the definition of "trading cities," or "Handelsstaedte." However, even in these cities business with wholesalers, retailers, manufacturers, etc., must be confined exclusively to the particular line of goods regularly handled by such parties. The single contracts and sales to wholesalers must be confined to that class of goods which wholesalers are permitted to deal in under the law of December 29, 1857. Under this law the minimum quantity that may be the subject of a transaction is, in general, limited to 40 krone (\$10.72).

ADMISSION OF SAMPLES.

Commercial samples are subject to import duty according to the tariff. Such samples, as well as the pattern books or pattern cards which the commercial traveler may carry, must be shown at the first custom-house at which he arrives, and a note is made on the license as to the nature and quantity of samples. Failure to declare the samples on arrival in the country may lead to their confiscation.

If the samples are reexported within four months and proof furnished as to their identity, the duty is returned.

DOMINICAN REPUBLIC.

[STATEMENT OF THE MINISTER OF FOREIGN AFFAIRS OF THE DOMINICAN REPUBLIC.]

No special laws seem to exist regarding the treatment of commercial travelers or as to the admission of the samples which they bring. The practice in the custom-houses is to determine the amount of duties which the samples would pay; to require from the owner the payment of duty or a bond for this amount, which bond must be given by a local merchant to the satisfaction of the interventor of the custom-house, and, when the owner returns, to collect from him the value of what he has sold. The custom-houses ordinarily allow for this purpose a period of ninety days.

ECUADOR.

[REPORT BY CONSUL HERMAN R. DIETRICH.]

There is no special law in Ecuador respecting commercial travelers. No license is required, and samples are admitted free of duty, provided a written guaranty, signed by some responsible firm of the port of entry, is presented to the collector of customs to the effect that the samples will be reshipped within a specified time, either three, six, nine, or twelve months from date of entry.

Advertising matter and samples of no commercial value, whether brought by the traveler or sent by post or freight, are admitted free of duty.

In addition to that, commercial travelers enjoy the right, in common with all other travelers, to bring with them up to 150 kilos (330 pounds) of personal baggage.

EGYPT.

There are no regulations governing the admission of commercial travelers or the practice of their profession. The duty on samples has to be paid in cash or be secured by a bond which is canceled upon the reexportation of the samples within one year.

TRADE WITH SWEDEN.

AN APPEAL FOR CLOSER CONNECTIONS IN OUR TRADE RELATIONS.

Consul W. Henry Robertson, of Gothenburg, makes the following report on the importance, to American exporters, of having Swedish agencies and making direct shipments to that country:

By far the most serious of several obstacles to a material increase in the sale of American products in Sweden is the antiquated custom of exporters of the United States of dealing with this growing and prosperous country through agents in Copenhagen and Christiania, instead of selling and shipping to it direct, as do all other countries. It is time these methods of business should be readjusted to meet a situation that has radically changed. Manufacturers and exporters should personally visit those countries in which they deem it worth while to attempt to introduce or increase their trade, in order to keep abreast of the changing exigencies of a market.

With the limited transportation connections existing many years ago between the United States and this part of Europe it was natural that American goods should reach the customers of Denmark, Norway, and Sweden through agencies created at the large seaports of England and northern Europe. As these connections converged toward Germany and Denmark, Copenhagen obtained, and still enjoys, the bulk of the business of distributing American products in Scandinavian countries. Christiania has successfully competed for a portion of this business, more especially since the steamers of the Scandinavian-American line began touching at that port.

This condition of things is detrimental to our trade with Sweden, and is rendered unnecessary by the system of shipment under through bills of lading.

American exporters would quickly see a great difference in their favor if they would assign the territory of Sweden itself to Swedish representatives at Gothenburg or Stockholm.

OPENING FOR NEW BUSINESS CONNECTIONS.

Another serious objection to selling to Sweden through general agencies at foreign ports is the unnecessary expense that is incurred for the profits of these middlemen and the reshipment of the goods. This affects unfavorably both the profits of the American exporter and the purchasing power of the Swedish buyer, besides often causing quite needless delays in delivery. This happens chiefly in the cases of foodstuffs, flour, pork, oils, and dried fruits, in which certain American concerns enjoy a large trade. It would be a great advantage to American trade if some younger and smaller concerns would embrace the opportunity now offered to enter the Swedish field. They would not only sell all the goods that are now bought from the United States, circuitously, but they would undoubtedly sell a great many more. What is far better, they would get in direct touch with the Swedish people themselves, their business methods and preferences, and the opportunities of their market.

It would be an excellent idea for American firms expecting to do an export business in any line to file with the Department of Commerce and Labor a clear statement of their financial responsibility and the articles in which they are to deal. There are many foreign importers who are alert for securing the direct representation of new

and enterprising concerns, but the difficulty is for them to learn of the inauguration of such new ventures. They are perfectly willing to enter into competition with the older and larger concerns in the foreign field, and the Department of Commerce and Labor could perform an excellent service by bringing these exporters and importers together.

HOW TO GET THE TRADE.

Reference has been made above to the great importance to exporters of a personal visit to Sweden, not only for studying its markets, but for selecting representatives or purchasers here of unquestionable standing and reliability. This being done, there should be no good ground for refusing the credits that are usually accorded here. The American practice of selling for cash against shipping documents is not approved here, as the Swedes, just as other people, like to see what they are getting before they pay for it.

In view of the increasing freight and passenger traffic both ways it can only be a comparatively short time before there is a direct line of steamers between Gothenburg and the United States. Gothenburg is the leading export and import center of the Kingdom; it will undoubtedly be the Swedish terminus of a steamship line to the United States; it already possesses direct lines to the Mediterranean, Africa, Asia, Australia, and South America; its harbor, unlike that of Stockholm, is open the entire year, and its geographical situation makes it the logical distributing point for American goods.

CHILEAN FISCAL RETURNS.

STATISTICS OF REVENUE AND TRADE ANNOUNCED BY PRESIDENT.

A dispatch has been received from the American legation at Santiago de Chile, containing a translation of extracts from the message of President Montt to the Chilean Congress at the beginning of its regular session on June 1 last, which are in part as follows:

In 1907 the revenues collected by the Government were 40,001,691 pesos gold [gold peso=36.5 cents American currency], and 154,976,385 pesos paper [Chilean paper peso worth on July 23, 18 cents], which, added to the 6,406,726 pesos gold and 7,177,065 pesos paper from 1906, made a total sum for 1907 of 46,408,417 pesos gold and 162,153,450 pesos paper. The expenses of the same year amounted to 31,134,446 pesos gold and 180,640,338 pesos paper.

Our international commerce reached in 1907 the sum of 573,762,585 pesos gold on the basis of 18 pence. The importations amounted to 293,681,855 pesos according to tariff value, and the exportations to 280,080,730 pesos according to the current market values. If we compare these figures with those corresponding in 1906, we find an increase of importations of 55,984,213 pesos and a decrease of exportations of 9,540,067 pesos.

Peruvian Irrigation Machinery.

In answer to queries regarding irrigation machinery in Peru Special Agent Charles M. Pepper says that should irrigation develop to the extent that is hoped under the policy of President-elect Leguia, the machinery most likely to be required will be heavy breaking plows and scrapers for canal construction and machine rock drills and compressed air outfits for tunnel work. The irrigation projects are in charge of the Institute of Mines at Lima, which is a branch of the Department of Fomento. Correspondence may be had with the director in English.

INDIAN RAILWAY RETURNS.

ANNUAL PROFITS OF AN EXTENSIVE AND GROWING SYSTEM.

According to the administration report on railways in India for the year 1907, Consul-General William H. Michael, of Calcutta, finds that there were 924 miles of new road opened to the public, making a total of 30,010 miles of road for all India at the close of the year. He supplies other details of the progress of India's railways:

By the end of March, 1908, the lines open made up a mileage of 30,206, and lines under construction and sanctioned 2,516 miles. During the year 290 miles of road were sanctioned.

The total capital outlay on all lines at the close of the year 1907 amounted to \$1,328,105,000. The expenditures sanctioned for 1908-9 amount to \$50,000,000. Last year the lines placed orders in England for 2,900 covered and 1,450 open freight cars. The cars as received will be distributed over the lines of companies and State where most needed.

The additions to rolling stock to all the lines during 1907 was 229 engines, 736 coaches, and 6,118 freight cars. The rolling stock ordered, but not yet delivered, on account of the 1907 sanction, consists of 514 engines, 1,879 coaches, and 6,118 freight cars. Since December last provision has been made for additional rolling stock, as follows: Eighty-nine engines, 406 coaches, and 4,821 freight cars. Much of this rolling stock will come from England in "knock-down" shape and will be put together in the shops of the different roads.

EARNINGS—PASSENGER TRAFFIC.

The gross earnings of all lines were \$157,562,333, an increase of \$10,504,660 over 1906. The net earnings for the year amounted to \$76,609,330, an increase over 1906 of \$2,909,330. The return on the capital outlay was 5.77 per cent, as compared with 5.83 per cent in 1906.

In the increase of gross earnings the following lines are represented: North Western State Railway, 29 per cent; Great Indian Peninsula Railway, 14 per cent; Bengal and North Western Railway, 7 per cent, and the remainder was contributed mostly by the Bengal Nagpur, Eastern Bengal State, Oudh and Rohilkhand State, and Southern Mahratta railways.

The total number of passengers carried was 305,890,000, against 271,006,000 in 1906. The earnings therefrom amounted to \$50,150,000, against \$45,610,330 in 1906. The third-class passenger traffic alone amounted to \$4,101,330. Over 31,000,000 of third-class passengers were carried during the year, most of whom were pilgrims, native marriage parties, visitors to fairs, and movement of laborers from scarcity districts in search of employment. The other classes of passengers also showed an increase. The largest per cent of passenger earnings was by the North Western State Railway, which was 21 per cent of the whole.

The average passenger rate charged per mile was a trifle over 2½ cents, and the average distance traveled was 39 miles.

FREIGHT TRAFFIC—FINANCIAL RESULTS.

The aggregate tons of freight handled during 1907 was 2,909,330. The returns on the capital outlay was \$62,100,000, and the earnings

therefrom amounted to \$97,466,660, an increase of 3,230,000 tons over last year and of \$5,483,860 in the freight earnings. The receipts were cut down somewhat by the strike on the East Indian Railway.

The total weight of grain and pulse, raw and manufactured cotton, coal oil, seeds, sugar, salt, and jute handled during the year amounted to 33,710,000 tons, and the earnings on this freight amounted to \$63,849,330. The traffic in the commodities enumerated represents 70.73 per cent in weight and 70.06 per cent in earnings of the total freight carried for the public.

The total output from the collieries during 1907 amounted to 11,150,000 tons. The traffic in coal carried by railways increased during the year from 11,190,000 tons in 1906 to 12,190,000 tons in 1907, while the earnings from this source fell from \$10,761,000 to \$10,618,330. This decrease is due to the reduction in freight on coal for distances of over 200 miles.

The report states that the financial result of the State and guaranteed railways for the year was a net gain to the State of \$12,759,660 after meeting, in addition to the expenses of working, all interest charges on capital outlay by the State, and on capital raised by companies, and also the annuity payments of railroads purchased by the State, including both interest and the portion that represents redemption of capital. This is the eighth year in succession that there has been a surplus.

KOBE AND OSAKA.

THE TWO GREAT SEAPORTS OF THE JAPANESE INLAND SEA.

With the advancing improvements of Osaka Harbor, a rivalry between that port and Kobe is springing up. Consul Hunter Sharp, of Kobe, transmits the following from an English newspaper published in Japan relative to the future importance of the two Japanese ports:

Osaka Harbor, on which \$11,500,000 has been spent during the last ten years, is of little public benefit in its present unfinished condition. Should the proposed works be completed, it need not necessarily be at the expense of Kobe Harbor, as Osaka aims at developing the Chinese, Korean, and coasting trade, together with the business in raw cotton and other materials required by its manufactories, while Kobe is more concerned in the European and American trade. Thus the interests of the two ports may be supplementary in a large measure to each other, and both can grow side by side.

Fruit Canning Industry in Ontario.

Consul W. H. H. Webster states that Niagara Falls, Ontario, is situated in the finest fruit belt in Canada. Several large canning factories are in operation in this district. At one new and modern factory fruits are selected and graded in the most careful and cleanly manner and put into sanitary enamel-lined cans, which are manufactured in a large factory adjoining, having a capacity of 40,000 daily. The process of canning used preserves the natural color and flavor of the fruit, and the packing in the sanitary cans is a surety against ptomaine poisoning.

FLAX GROWING IN RUSSIA.

THE ACREAGE IS DECREASING WHILE COTTON IS GROWING IN FAVOR.

The flax industry in Russia, as affected by the growing popularity of cotton, by labor troubles, and the substitution of sunflower for linseed oil, is discussed in the following report by Consul John H. Grout, of Odessa:

From time immemorial flax has been an important product of agriculture in Russia. From north to south and from east to west its cultivation runs over a wider region than that of almost any other plant. Natural selection has qualified the plant to prosper so far north that it barely finds there the necessary time to season its valuable fiber and to ripen its seed, so that it is often frost-bitten. In such a case a reserve stock of seed from the previous year must always be kept, in order to have material for sowing in the spring. On the other hand, it vies with wheat in the extreme south in the matter of being able to resist the drought and heat.

In the north and center of Russia the plant is cultivated for the sake of its fiber, which is fine and strong enough to form the finest cambric or the strongest rope, though it is not used for the latter purpose, being considered too expensive. Here the seed is a mere incidental product. In the south the plant is grown solely for its seed, and the fiber is not extracted from the stalk. As the plants here, for the sake of the better development of the seed, are sown much wider apart, they are shorter and have more developed branches.

In such a case the woody portions in the stalks greatly predominate over the fiber, and the latter is coarse and uneven in addition to being ramified. This is the reason why experiments in the line of exporting the locally unused stalks for the purpose of extraction of the fiber which is running to waste have not been attended with the results expected. However, the linseed obtained in south Russia in favorable years is supposed to be the best of its kind and meets with much favor in the markets. The last few seasons, however, have not resulted in good harvests of linseed and the home demand for this article has increased, so that exports have greatly fallen off.

DRAWBACKS TO FLAX GROWING.

It may be mentioned that linseed oil, when quite fresh, was formerly used as a food, for which purpose it was prepared on a small scale at the farms where produced. However, it seems to have been supplanted by pumpkin seed and sunflower seed oil, especially the latter, which is in great favor as lenten fare. This is quite natural when we take into consideration the much greater importance of linseed oil for various industrial purposes.

The fiber flax has of late found several successful rivals in exotic fibers. As a result of this, the trade is in a depressed condition, and the cultivation of flax is much less remunerative than was formerly the case. This difficulty is further aggravated by the circumstances attending labor troubles in Russia. It must not, therefore, be a matter of surprise if the 3,000,000 acres under flax cultivation some twenty years ago are now found to have fallen off to 2,800,000 acres.

The extreme rootlets of the plant extend almost as deep into the ground as the plant rises above it. This is particularly so when the

flax is in its most congenial soil, a rich loam with a well-drained underground of loose gravel or gray sand. Where these conditions do not exist naturally they must, as far as possible, be created artificially by as deep loosening of the subsoil as possible, and care also must be taken to have the ground as free as possible from weeds.

LABOR WELL REQUIRED.

Flax repays the labor bestowed upon it. Most weeds can with care and energy be eliminated from flax fields, but extremely difficult to combat are the parasites and the fungoid growths which push their mycelia into the flax plant itself and either kill or cripple it. As stated above, flax is sown thinly (about one-half bushel per acre) in the south and east parts of Russia, where it is grown for the seed, or, if both seed and fiber is desired, as in central Russia, about one bushel to the acre is sown. If fiber alone is required, as in parts of west and north Russia, from one and one-half to double that quantity is used per acre. In south Russia a satisfactory return is considered to be about ten bushels to the acre of linseed, and the other parts about six bushels of seed and 400 to 500 pounds of fiber.

It has frequently been pointed out that there would be room for considerable increase of flax cultivation if the whole of the fiber, or even the best class of it, were to be used up in Russia itself and not exported. This wish, however, seems to have but little chance of being realized, as there is a growing demand here for textiles produced from cotton. Another circumstance also militates against extensive flax growing here—the fact that it is justly credited with depleting the ground, so that where flax frequently reoccurs in the rotation of crops, it soon becomes necessary to take vigorous measures and to use strong fertilizers to restore the exhausted soil. The fetid waters where flax has been retted have done much to drive valuable members of the piscine family from streams into which such retting waters were allowed to flow. It has now been found that these obnoxious waters act as a valuable fertilizer where they are allowed to flow over fields or meadows, provided the ground allows them to percolate.

CALIFORNIA PRUNES.

COMPLAINT FROM GERMAN DEALERS AS TO LACK OF FRESHNESS.

Vice-Consul James L. A. Burrell, of Magdeburg, reports that complaints are again heard about California prunes imported into that German market during 1907, concerning which he says:

The first shipments, which were sold very cheaply by Hamburg firms as early as May, gave cause for complaint in many instances. Instead of consisting entirely of 1907 fruit they were mixed with older prunes which had been freshened. In some cases they consisted entirely of old prunes. The deficiencies were not discovered at Hamburg, and later the seller was able to protect himself, because the complaint had not been made in the prescribed time. In another case the Magdeburg firm was unable to secure damages, as the Hamburg firm claimed to have bought the prunes from California as 1907 fruit, and deception on his part could not be proved. The Magdeburg Chamber of Commerce warns against buying from any but well-known California and Hamburg firms.

IMPORTANT NORWEGIAN RAILWAY.

DIFFICULT CONSTRUCTION OF NEW BERGEN-CHRISTIANIA LINE.

In reporting that on June 10 the first passenger trains were dispatched in each direction on the railway that traverses the great mountain barrier between Bergen, the chief city of western Norway and Christiania, Consul Felix S. S. Johnson points out the importance of this line:

It will probably take the Government at least a year before the enormous difficulties that nature places in the way of railway traffic in those regions have been completely overcome. The official inauguration ceremony will not take place before the broad gauge Bergen Railway has been joined to the Northern Railway leading into Christiania, probably in 1910. The newspapers signalize, however, and rightly, the event of these two trains as an important epoch in the history of the Norwegian Nation. Bergen, the next largest town in Norway, has been hitherto separated from Christiania, and therefore also from the international railway communication by a steamer journey of at least three nights and two days. After the trans-mountain railway has been joined a couple of years hence with the Northern railway, a journey of some twelve hours only will separate the two cities.

When the first line of railways in Norway was decided upon in 1851, the trunk line from Christiania to Eidsvold on Lake Mjøsen, it was believed that it would remain forever the only railway in the Norwegian mountainous country. But only twenty years afterwards the Storting decided upon the construction of a railway to connect Lake Mjøsen with Trondhjem, and about simultaneously the idea of connecting western with eastern Norway, across a vast tract of snow-clad mountains rising beyond 4,000 feet, was started in public discussion.

In the beginning of the seventies exploration work was commenced and on March 1, 1894, it was decided to build the Bergen Railway, and to-day the steel connection between Bergen and Christiania is all but completed, a part at the eastern link only remaining unfinished.

The new railway, which passes for 35 miles through regions of almost permanent snow and ice and which reaches an altitude of 1,300 meters (4,265 feet) above the sea level, will no doubt for a long time to come hold the record of the railway construction of the world as far as engineering and traffic difficulties are concerned; the Gravehals tunnel, in itself a great triumph of engineering skill, was cut through in nine years.

This railway, which is expected to show a surplus in its operation after a year or two, will be one of the principal tourist attractions of Norway and will completely change the traveling route in many cases more or less unhealthy.

Correction.

The report on "Rubber in North Borneo," by Consul Lester Maynard, of Sandakan, and published in April 9 issue of Consular and Trade Reports, alluded to foreign labor employed. The word "Javanese" was misprinted "Japanese." There are no Japanese laborers in British North Borneo.

GROCERIES IN MOROCCO.

COMESTIBLES WHICH AMERICAN EXPORTERS MIGHT FURNISH.

Vice-Consul George E. Holt, of Tangier, transmits the following list of prices of grocers' supplies usually found in the stores of that Moroccan metropolis:

Probably no grocer and perhaps no other merchant in Morocco buys all of his goods from any one country. The exigencies of trade have made it profitable for him to go to all the principal markets of Europe, and in some cases to American markets, for his supplies. Therefore the shop of the average Moroccan merchant contains either the cheapest goods or the best goods to be bought in Europe at a moderate price.

The following figures give cost prices on certain articles in the stock of an American grocer in Tangier bought in London, and may be taken as prevailing prices on these goods in Morocco:

Per hundredweight: Soaps, blue mottled, \$5.04; carbolic, \$5.46; household, \$5.76; dried peaches, \$17.52; dried pears, \$16.80; fruit jams, mixed, \$3.12; raspberries, \$4.80; greengage, \$3.84; apple, \$4.80; black currant, \$6, and plum, \$4.08.

Per dozen bottles: Perfumery, jockey club, \$5.22; musk, \$5.22; violet, \$4.80; white rose, \$4.56; Scotch whisky, \$2.44 to \$4.80.

Per pound: Butter, Danish, choicest quality, 28 cents; selected, 34 cents; Lombardy, nicest quality, 24 cents; Irish, extra superfine, 22 cents. Biscuits and crackers: Albert, 12 cents; American crackers, 9 cents; boudoir, 20½ cents; cracknel, 22 cents; fairy cakes, 15 cents; family, 8 cents; milk, 8 cents; water, 8½ cents.

Tinned meats, per dozen cans: Ox tongue, 1-pound tins, \$4.86; lunch tongue, 1-pound tins, \$2.40; corned beef, 2-pound tins, \$2.16; boneless chicken, 2-pound tins, \$3.60; fresh herrings, 1-pound tins, 72 cents; prawns bratilia, 1-pound tins, \$1.92; oysters, per 4 dozen cases, \$1.19.

Tinned vegetables, per dozen tins: Asparagus, 2-pound tins, \$2.64; petit pois (green peas), pint tins, 72 cents; champignons, pint tins, \$1.44; haricot vert, pint tins, \$1.14; spinach, quart tins, \$1.26.

Fruits in sirups, per dozen tins of 2 pounds each: Cherries, \$2.16; apricots, \$2.04; pears, \$2.10; greengage, \$1.98; chinois, \$1.15; tamarinds, \$1.92; dates, \$1.86.

Candles bought in Belgium, per dozen pounds: Sperm, \$1.02; paraffin, 98 cents; wax, 98 cents.

Self-raising flour from London, \$2.36 per dozen bags of 5 pounds each, and flour from Marseille, \$6.40 per 220 pounds.

Heavy Exportation of Chilean Nitrate.

Consul Alfred A. Winslow, of Valparaiso, reports that the export of nitrate continues exceptionally strong. During the month of May, 1908, it amounted to 3,168,217 Spanish quintals of 101.41 pounds each, against 1,650,720 for the same month in 1907. During the first five months of 1908 the exports of nitrate have amounted to 18,995,871 Spanish quintals, against 13,071,891 quintals for the same period of 1907, or a gain of 5,923,980 quintals. The price of nitrate continues low, being \$1.76 United States gold per quintal at docks in Chile.

NOTTINGHAM'S EXPORTS DECLINE.

UNITED STATES PURCHASES LESS GOODS, EXCEPT OF LACE MACHINERY.

Consul Frank W. Mahin reports that the declared value of British exports from Nottingham to the United States decreased in the second quarter of this calendar year even more than during the first quarter, when the decrease in total value was 25 per cent, in value of lace goods 33 per cent, and in number of invoices nearly 25 per cent, in comparison with the first quarter of 1907. The consul's details follow:

The decline in this year's second quarter, compared with last year's, was nearly 40 per cent in total value, over 40 per cent in the value of laces, and nearly 30 per cent in the number of invoices. The decline was general this year through the entire list of articles of export, except lace-making machinery, which increased in value from \$46,184 during the second quarter of 1907 to \$74,105 in this year's second quarter. Machinery also increased in the first quarter of this year in comparison with last year, indicating that the founding of lace factories in the United States is growing apace.

Exports from the consular agencies at Derby and Leicester declined 40 and 60 per cent, respectively, in this year's second quarter compared with last year's. The decreases were chiefly in salted sheepskins at Derby and raw wool at Leicester.

The declared value of the exports from Nottingham to the United States during the fiscal year ended June 30, 1908, was \$6,949,104; during the preceding fiscal year, \$7,510,254. But with this exception, Nottingham's sales to the United States were greater during the past fiscal year than in any other year of this century. The decrease in the fiscal year 1907-8, compared with the preceding, was wholly in the last two quarters, and due, no doubt, to the financial crisis in the United States.

The value of lace exports declined during the year to \$5,358,246, from \$6,253,758 in the fiscal year 1906-7. The lace exports to other countries have also decreased, but in less proportion. Lace factories are generally working on short time and with only a part of their machines. Some of the manufacturers are in difficulty, but only one has failed. Signs of improvement have appeared in the lace market during the past month, buyers and mail orders having grown in numbers, and it is generally believed that the worst of the depression is now over.

The exports from Derby and Leicester decreased during the past year in about the same proportion and for the same reasons as those from Nottingham.

The hosiery industry is languid, though in better condition than lace. The most active among the great manufacturing industries of this section is boot and shoe making. The adoption of American styles and methods and favorable trade conditions are the causes.

CONSUL HUNTER SHARP, in a report from Kobe, furnishes detailed lists of the American steam turbines used by Japanese industrial concerns. Those in service and under construction of one make aggregate 1,057,130 total kilowatts capacity.

BRITISH INDIA NOTES.

Consul-General William H. Michael, of Calcutta, furnishes the following commercial, industrial, and miscellaneous news concerning British India:

The cotton cloth produced by the mills of India during the year ended March 31, 1908, amounted to 650,000,000 yards, and the dhooties to 170,000,000 yards.

Attention was recently called to the sida-fiber plant of India. A government official in charge of the farm says that India can produce all of this fiber required by commerce.

The total exports of opium from Bombay from January 1 to May 15, 1908, amounted to 7,639½ chests, out of a total permissible export during the current year of 15,100 chests.

Electric power for domestic and mechanical purposes has become almost a necessity in Calcutta, and a reduction in the cost would have the effect of largely increasing the consumption of the electric current.

The rug weavers of India are somewhat alarmed over the reports that English carpet weavers have invented and commenced using a power loom which will turn out goods in imitation of the hand-made rugs of the Orient.

In an essay on the iron and steel industries of the Punjab, the assistant commissioner of that province comes to the conclusion that, as regards articles of a purely utilitarian nature, there is a steadily increasing demand for European manufactures.

A proposition is taking form for the establishment in the Himalayas of a sanatorium on modern lines for consumptives. The rich natives are manifesting a deep interest in the scheme and seem to be ready to help financially in bringing it to a realization.

The cotton-seed farms established in the central provinces and Berar having turned out a success, four more farms will be established this year. The cultivation will be carried out in special lines for seed production, as the produce will be available for distribution.

The port commissioners of Rangoon, Burma, have been authorized by the Indian Government to negotiate a loan of \$2,500,000, bearing interest at the rate of 4 per cent per annum, to run thirty and forty years, for the improving of the port of Rangoon and river training works.

The Bombay government has accepted the offer of a prominent native gentleman to provide for the reception of a hundred famine-made orphans in a leading orphanage. Two offers have been made in other provinces to take over children rendered destitute owing to the prevailing famine and scarcity.

CONSUL R. S. CHILTON, jr., reports that the general business situation in Toronto, as stated in a recent Canadian trade review, shows little change from recent conditions, but the crop situation and other factors give ground for an encouraging outlook. The dry-goods trade is better and groceries, hardware, and metals also show increasing activity.

PACKING FOR FAR EAST.

MARKED IMPROVEMENT NOTED IN SHIPMENT OF AMERICAN GOODS.

Consul Jacob E. Conner, of Saigon, Cochin-China, makes the following report on the gratifying improvement in packing, as observed at Manila, concerning American goods:

It has been noticed in Manila that there has been a very gratifying improvement during the last twelve months in the packing of goods imported by the Philippines from the United States. While it is not yet all that it may be, it is observed that more care is shown in the selection of stock for the casings. This is sometimes reenforced, as it always should be, with strap-iron bands. The necessity for this is apparent to all who have watched the methods of handling, and especially transshipping freight by means of coolies. These, with a bamboo pole and a piece of rope, carry in a most precarious fashion practically all sorts of merchandise brought to this region, and the package is liable to drop and burst at any moment.

Another improvement noted is in the making of uniform packages instead of placing a number of miscellaneous articles in the same case.

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THE MOTOR INDUSTRY.

APPLIED TO BOATS.

SCOTLAND.

EXPERIMENTAL USE OF MODEL VESSELS IN FISHING FLEET.

The following report concerning the efforts of the Fishery Board to induce the Scotch fishers to adopt the use of motor boats is furnished by Consul Rufus Fleming, of Edinburgh:

In the entire Scotch fishing fleet, comprising 10,365 vessels, having an aggregate tonnage of 144,385 tons, there are not more than six boats propelled by motor power, and these have been recently introduced in the Clyde area. On the North Sea coast of Scotland no motor boat is at present employed in the fishing industry, notwithstanding that the Fishery Board for Scotland has earnestly endeavored, in a practical way, to induce fishermen to adopt the motor.

In 1905 the Fishery Board began an experiment in the application of auxiliary power to sailing fishing boats of the common type. A Fife fishing boat, measuring 72 feet over stems, with 21 feet of beam and drawing about 8 feet of water aft, was purchased and fitted out at a cost of \$3,806. A 4-cycle 25-horsepower motor, of Danish manufacture, was installed, being fitted in the cabin and occupying comparatively little space. To obviate any danger of explosion, the fuel used was ordinary paraffin, which was stored in two tanks fitted into the wings of the boat. The motor was started from the deck of the vessel by one man, who also attended to the helm. It started on a free engine, and was connected to the propeller shaft by a metal-to-metal clutch. Both inlet and exhaust valves and also the silencer were water-jacketed all around, an arrangement which kept down the heat generated by the explosion of the gas.

The propeller, which had only two blades and was reversible, could be feathered fore and aft, so that there was no drag on the boat when under sail. Going astern was accomplished by means of gear on the shaft which reversed the shafts of the propeller, and the reversing gear and all controlling arrangements could be operated by the helmsman without leaving the wheel. The capstan, originally fitted into the vessel for hauling the nets and gear and hoisting the sails, was

also driven off the motor by a chain and horizontal shaft. It was vertical and resembled the ordinary steam capstan, except that it had two barrels, one large and the other small, the one placed on top of the other. The engine and capstan cost \$1,708, making the cost of the fully equipped boat \$5,509.

CAUSES OF FAILURE—PRINCIPAL OBSTACLES.

With a crew of six men this boat, called the *Pioneer*, began the season in Aberdeen waters, but in a few weeks the capstan broke down in rough weather and the men were so dissatisfied with it that they refused to put to sea again.

The crew's objections to the motor capstan were (1) that the speed could not be regulated; (2) that for working the sails in bad weather the motor had to be kept continually running, and this involved extra expense; (3) that in case of a breakdown of the engine there was no provision for working the capstan by hand; (4) that no provision was made by which the catch of fish could be hoisted onto the quay; (5) that in hauling the nets in stormy weather the capstan stopped when the strain upon it became too great, so that the engine had to be started again by hand (a steam capstan stops when the strain becomes too great, but it starts again of its own accord when the tension is relieved); (6) that the small barrel of the capstan (which could be more easily regulated than the larger one) injured the bush rope when hauling the nets.

After further efforts and considerable outlay on the part of the board for the improvement of the *Pioneer*, which was considered satisfactory by the board, that vessel was sold in 1907, and the matter of motor fishing boats left for private enterprise to take up.

The principal obstacles to the introduction of motors in first-class fishing boats at the present time are (1) the dissatisfaction of the fishermen with a speed of less than $8\frac{1}{2}$ knots, and (2) the apparent failure of the motor capstan. Concerning these difficulties, a naval expert employed by the Fishery Board in their experiments says that it is impracticable to drive these bulky fishing boats at such a speed, under existing conditions, "without the sacrifice of considerable advantages and the payment of a far higher price than it is worth." The question of the capstan he regards as a serious one, and dealers in marine motors state that unless a motor capstan can supersede the steam capstan, thus simplifying the working of the boat and saving space, it will be almost impossible to persuade fishermen who operate boats of the highest type to adopt the motor for propulsion.

DEMONSTRATION IS NECESSARY.

It remains for manufacturers of the least expensive marine motors to demonstrate to the owners of such boats that this method of propulsion is economical. In fact, that is an essential step toward the introduction of motors in any class of fishing boats—a demonstration to the fishermen that a type of motor has been devised which will do the work required of it and at a cost not exceeding the increased profits they may reasonably expect from acceleration of their return to harbor, where the first boats in get the best prices.

Scotch fishermen are not easily convinced of the merits of any motor. Some of them have from time to time invested in motors which promised much but failed in performance, and this experience

of the few has made all extremely incredulous as to the claims put forward for any device of the kind. Manufacturers must overcome, therefore, not only a natural racial conservatism, but also a strong prejudice. These obstacles are not insurmountable, but it is well that the difficulty should be fully understood. It is the opinion of dealers in this line of machinery that in order to sell here motors for fishing boats to any considerable extent the manufacturers or their agents must operate a boat in the fishing industry, for one season at least, and convince fishermen by the results that the advantages of motor power outweigh the additional cost. The fishermen will not learn this lesson from the Norwegian, Dutch, or Danish fisheries, where the conditions are somewhat different; they must have it brought directly home to them in Scotch waters.

SUCCESSFUL AMERICAN MOTOR ENGINES.

Consul Fleming further describes the slow progress of the introduction of the motor boat in Scotland and of the success of a boat equipped with American engines as follows:

Owing to unfavorable weather during the greater part of the year and to the almost continuous roughness of the Firth of Forth, in which arm of the sea, moreover, there are only two convenient harbors or shelters for small craft, the motor boat has not become popular on the east coast of Scotland either as a pleasure boat or for other uses. There are few such boats in this district.

The first motor-boat race ever held in these waters took place on July 4 for a challenge trophy presented by a prominent citizen for annual competition on the Firth of Forth by British-built boats fitted with British-built engines. As, however, only two entries were received for the first race under these conditions, the donor of the cup and the racing committee of the Scottish Marine Motor Boat Club agreed to throw open the race to all comers so far as the cash prizes were concerned, reserving the honor of winning the trophy to British craft. A course of 10 miles was set, and the race was run under handicap conditions adjusted by the Scottish Marine Motor Boat Club. Three boats started, two of which were British built and one was fitted with American engines. The last-named boat, with a handicap allowance of twenty minutes, won the first prize money, her actual time being only one minute and eleven seconds more than that of the winner of the trophy.

This first racing event of its class on the Firth attracted much attention and may lead to some development of the trade in motor boats and motor engines. I am informed by a dealer in marine motors that any demand likely to be created in this line will be for boats of 5 horsepower to 7 horsepower.

FRANCE.

MOTOR BOATS FOR USE IN THE SARDINE FISHERIES.

Vice-Consul J. D. Wise, of Bordeaux, furnishes the following report concerning the use of petroleum motors in the French sardine fisheries:

In connection with the gradual expansion of the motor-boat industry at this port and the various uses to which the marine motor has

been adapted, a striking illustration is furnished by the "pinasse," or canoe, fitted with a petroleum motor now being used with excellent results off the French coast by the sardine fishermen of Arcachon.

The American motor has made a small but successful beginning at Arcachon, its ease of operation and durability winning a place among a strong field of competitors. The growing popularity of the motor-propelled pinasse may yet be instrumental in opening a market to the American product of this description.

EFFECTIVE WORK OF THE PETROLEUM MOTOR BOAT.

The following is a translation from the Bulletin de la Société de Géographie Commerciale of Bordeaux on this subject:

The first attempt at fishing for sardines at Arcachon with boats propelled by petroleum motors dates from the latter part of the year 1906. During the month of September of this year a number of the owners of "canots à pétrole" conceived the idea of using their craft for sardine fishing. The sardine having lingered on the coast between Arcachon and Bayonne, the results achieved were remarkable. The fishing lasted thus during the greater part of the winter, and was particularly productive during October and November.

Stimulated by this success the owners determined to adopt the new system. Constructors were deluged with orders, and it is estimated that before July, 1908, at least 125 pinasses or motor canoes, properly equipped for fishing, will be navigating the bay of Arcachon. The boats employed are of two kinds, the long primitive canoe with squared ends and the ancient sailing pinasse, to which a motor is adapted.

The fact that winter fishing is conducted far from the waters of the bay will cause the fishermen to eventually use stancher craft, partly bridged over and better able to resist the shock of the sea.

The motors in use range anywhere from 4 to 15 horsepower.

A single pinasse 27 feet in length, carrying a 6 to 8-horsepower motor and a crew of 5 men, caught in fourteen trips 118,500 sardines. This catch sold for 3,662.50 francs (\$706.80). The expenses incident to the outlay for bait, oil, etc., amounted to 513.25 francs (\$100.05), leaving a net profit of 3,149.25 francs (\$607.80).

Another boat of the same type after six months fishing (September 1, 1907, to February 29, 1908) showed a net return of 3,000 francs (\$579) to the owner and 1,500 francs (\$289.50) to each of the 5 men composing the crew.

A third pinasse caught in twenty-five days 80,000 sardines, which sold for 3,614 francs (\$697.50). Most of this fishing was carried on during the winter months under adverse conditions.

It is very certain that without this fleet of pinasses à moteur ocean fishing during winter and summer would scarcely be productive of results, as the sardines are generally beyond the radius traversed by sailing boats of this size.

AUSTRIA-HUNGARY.

AMERICAN MOTOR BOATS AT PORT OF FIUME.

Responding to a New York request, Consular Agent G. Andrew Moriarty, jr., sends the following report on the conditions prevailing at the Austro-Hungarian port of Fiume, with regard to increasing the trade in American motor boats:

From investigations I can not find a large opening for motor boats in this district, consisting of the towns of Fiume and the Croatian counties of Modrus Fiume and Lika Krbava. There are few persons of leisure in Fiume apt to keep motor boats. There are, however, two large companies of torpedo-boat builders, who also build submarines, and they might be interested.

There is at present very little retail trade in such marine craft. There might be some opening in the small watering places along the coast in the neighborhood of Fiume, the trade of which would be commanded from the city itself. The best chance would be in Abbazia, across the bay from Fiume, where there are at present several motor boats, mostly of French construction. Firms interested in extending such trade here should not now try to engage largely, as there is as yet only a comparatively small field, but it appears to me that by beginning in a small way a trade might be built up in time. It would therefore be wise for American firms to enter into correspondence with the firms in Fiume interested in this line of goods. [List of these obtainable from the Bureau of Manufactures.] While there is at present but little demand for such boats, it would be well worth while for American firms to enter into correspondence with the firms here, as a trade might in time be built up owing to the proximity of such watering resorts as Abbazia and Porto Re.

At present there is a prejudice against motor boats, from the fact that all those introduced have broken down or behaved badly. Furthermore, it is understood that American motor boats are built largely for rivers and lakes. Here another type of motor boat is required, one with a high side to withstand the rough seas of the bay of Quarnero. It is hardly worth while for an American firm to send out a special agent, but great care should be exercised in the choice of an agent to represent them. The best way would be to send out a motor boat to an agent of sound integrity, who could exhibit it and overcome the existing prejudice. [The consul furnishes the name of an engineer who is interested in building and selling motor boats.]

GERMANY.

TRIALS OFFERED FOR AMERICAN MOTOR BOATS.

Consul William J. Pike, writing from Kehl, calls attention to the following opportunity for furthering the sale of American motor boats in Germany:

The city of Strassburg has very important shipping interests, so far as such can be conducted in an inland town, and a vast deal of commerce is directed through the river Rhine and canals, which makes it a distributing point. The municipal authorities are much interested in any scheme that will enhance their shipping facilities, and with the view of betterment, trials of different classes of motor boats have been made in this connection from time to time.

It has come to my knowledge that the experiments thus far have not been a success, and an opportunity for a test will be afforded American-made motor boats if there are concerns that desire to take up the matter.

Manufacturers of motor boats, for both freight and pleasure purposes, desiring to correspond with an official of the chamber of commerce with the view of introducing their boats into this territory, will be furnished the address and particulars upon application to the Kehl consulate.

JAPAN.

USE OF MARINE MOTOR ENGINES IN THE EMPIRE.

In forwarding a printed report prepared by the British consul at Kobe, Consul-General Henry B. Miller, of Yokohama, writes:

This report deals more especially with the situation in Kobe consular district, and that is likely to be the most important market for engines of this type for use in Osaka, Kobe, and generally through the inland sea. It would therefore be advisable that correspondence concerning these engines be sent to the Kobe consulate. The British consul's report follows:

Japanese engines—roughly made, which serve the purpose very well—are intended to use the coarsest and commonest oil which is produced in Japan. Possibly the finer British machine would need a better class oil. Also, there is no doubt in the mind of the writer that British-made engines (using kerosene) would always be bought in preference to Japanese, at a somewhat higher figure and higher cost of running, but at present the Japanese, having become aware of the advantage of using marine motors, must be content, when these are required for business purposes only, to use cheap Japanese-made motors, as no other are to be had at anything like the same figure. The workmanship of the British-made motor is much admired, but the outlay for such would not be made up by increased earning capacity by the vessel using them. For pleasure boats the demand for motors is limited to a few foreigners. Nor do the Japanese motor builders claim to make much, if any, profit on the machines they turn out. The demand exists, but so far it is not being met satisfactorily.

It is assumed that all leading marine motor builders have now agents in this country. In one case only, it is believed, have they on the spot an engineer capable of supervising the installation of motors or explaining their proper working. It is suggested, however, that if British motor makers wish to push their manufactures in this country they must go to the expense and trouble of being thoroughly well represented and having on the spot a practical engineer who should have at his disposal motors of several sizes, 10, 15, or 25 horsepower, to give practical demonstration of their qualities, and that not in British-built boats necessarily but in any or every kind of native craft in which it is possible to fix a motor. Five minutes' practical demonstration is worth piles of catalogues and advertisements, particularly to the Japanese. Schooners of 50 tons and upward seem most to need motors to help them to get through inland sea.

CANADA.

FACILITIES FOR MOTOR BOATS IN THE PRESCOTT DISTRICT.

Consul Martin R. Sackett furnishes the following information concerning the opportunities for American gas engines in the Prescott consular district:

The use of the internal-combustion engine, or gas engine, is fairly general in this consular district. It has long ceased to be a novelty. It is used in shops of every sort where light power is required.

This district is one in which the facilities for motor boating are unexcelled, as it fronts on the St. Lawrence, whose waters are perfectly adapted for motor boating. The Thousand Islands region of the great river, for a portion of its length, is within its bounds, and in these waters every sort of motor boat known is to be seen. It is true that the greater number of such craft are of American make and ownership, but their presence, with only an invisible boundary line to separate them from Canada, has made Canadians wholly familiar with such craft and stimulated their manufacture at home. The Rideau River and lakes are also in this district, also Charlestown Lake; all waters well adapted for motor boating. There are no large

factories for the manufacture of either boats or engines, though both are made on a small scale at Prescott, Brockville, and Smiths Falls.

CUBA.

POSSIBLE CHANCE FOR SALES AT SANTIAGO.

In reference to the demand and possible demand for American marine gasoline engines, motor boats and their equipment in Cuba, Vice-Consul H. M. Wolcott, of Santiago, states as follows:

It would seem that this district, with its many beautiful harbors and waterways, should be a good field for the sale of motor boats and accessories, yet there are comparatively few in use. This is principally due to the lack of facilities for repairing the motors when they get out of order and the high cost of gasoline here. Then, too, the Cuban people are not much given to indulgence in boating for pleasure. There is one so-called "nautical club" in this city, but boating seems to be a minor attraction with its members, notwithstanding the fact that the harbor of Santiago presents a most attractive field for this sport.

However, a motor boat, reasonable in price, easy to operate and keep in repair, might find some sale here if its practicability were properly demonstrated. I would suggest that the best way to introduce motor boats here would be for some firm to send an active representative, with a boat for demonstration purposes, who would be able to appoint and instruct agents and awaken the interest of the people. I do not anticipate that many orders would be secured just at present, yet the foundations might be laid for a fairly good trade in the future.

[The names of possible agents and buyers of motor boats may be obtained from the Bureau of Manufactures.]

APPLIED TO VEHICLES.

ALGERIA.

GOOD PROSPECTS FOR MODERATE-PRICED MOTORS.

Consul James Johnston, of Algiers, furnishes the following information concerning a possible market for American motor cars in Algeria:

There are good prospects of a permanent market in Algeria for a light, strong, moderate-priced car. Autos are extensively used by wine and oil merchants who have to travel in districts where as yet the railway does not exist.

In order to introduce American motor cars and establish a market therefor the manufacturer must be prepared for a little expense. The only effort that appears to have been made thus far in this direction has been to send catalogues in English, but it is unreasonable to expect to sell motor cars on the strength of catalogue description, and no agent would entertain the idea of representing a line of autos unless he had a sample car for demonstration.

The duty on motor cars from the United States is 60 francs per 100 kilograms (\$115.80 per ton of 2,240 pounds) on cars weighing

125 kilos and over. The duty on the same cars from other countries is 50 francs per 100 kilos (\$96.50 per ton).

[A list of prominent dealers in Algiers, together with miscellaneous information relative to conditions in Algeria interesting to American manufacturers desirous of opening trade in that French possession, is on file in the Bureau of Manufactures.]

SPAIN.

ACTIVE DEMAND, BUT NO AMERICAN MACHINES REPRESENTED.

Consul R. M. Bartleman, of Madrid, writes that there are over 700 automobiles in the Spanish capital, and a good market for more, including American machines, if they can compete with those now on sale. No American cars are now on the market. The motors now in stock are owned by the manufacturers who send them to their representatives to sell on commission. The consul sends the name of an American importer of goods from the United States, who is the only person likely to purchase cars outright. He also forwards lists of agents representing various foreign automobiles at Madrid, and catalogues and price lists of the makes on sale [all of which will be loaned to motor builders addressing the Bureau of Manufactures].

UNITED KINGDOM.

DULL TRADE BOTH IN AUTOMOBILES AND MOTOR CYCLES.

The British official returns for the six months ended June this year show importations into the United Kingdom of 3,879 automobile chassis and complete cars valued at \$6,574,797, as against 2,801 cars valued at \$5,706,249 for a similar period last year. In 1907, however, parts and fittings equalled \$6,405,992, while this year they only amounted to \$4,068,715, so that the total motor-car imports of all kinds for the six months ended June, 1908, \$10,643,512, show a drop of \$1,459,950 in comparison with \$12,112,242 in 1907. Motor cycle imports also show a decrease despite the increase in popular favor of this kind of sport. During the first six months of this year the import figures were 908 cycles, valued with parts at \$176,201. For the same time last year the figures are 1,142 cycles, valued at \$241,558.

As to British exportations for the six months ended June, 1908, some 390 motor cycles and parts, valued at \$119,156, were sent abroad in comparison with 330 motor cycles and parts, valued at \$127,171, for a similar period in 1907. Thus, despite an increase of 60 in the number of motor cycles imported, the total export value decreased by some \$7,300.

For the first six months of 1908, 991 motor cars were exported, a big increase over last year's figures, which were 886. In the total values, however, the first six months of 1907 yielded a total export of \$2,840,605, while this year's figures are only \$2,822,662.

MOTOR OMNIBUSES IN LONDON.

Consul-General Robert J. Wynne reports that a statement by the home secretary shows that there is now one motor-omnibus for every 2-horse omnibus plying in the streets of London. The full statement of the number of licensed vehicles in London is as follows: Taxicabs 1,508, hansoms 5,329, 4-wheeled cabs 3,768, motor omnibuses 1,046, horse-drawn omnibuses 2,281; total 13,932.

CANADA.

AGENCY NEEDED IN PRESCOTT DISTRICT.

Consul Sackett, of Prescott, reports on the use of motor vehicles in that district:

Comparatively few motor vehicles are owned here. There are perhaps half a dozen in Brockville, three in Prescott, and a few elsewhere scattered about the district, but for some reason their use has not become common. Nor is this, in my opinion, for reasons of expense. There is much wealth among the people. I can not find that there is any regular agency in the district for the sale of motor carriages. There ought to be such agency, and it is my belief that a car of moderate cost would find good sale, if such sale were pushed by the personal appeal of a good agent. The roads of the district are no better nor are they worse than is the case in the average country section, while the main thoroughfare, east and west, along the St. Lawrence River bank is, much of the way, macadamized, and far better than the average highway, while its scenic attractions are hard to duplicate anywhere. There is hardly a day during the season when automobiles do not cross the St. Lawrence here by ferry from the United States, en route to Toronto, Montreal, Ottawa, or other points of interest to tourists and pleasure seekers through Canada. This section is well worth prospecting by the manufacturers of a safe, hardy, moderate-priced automobile of American make.

CANADIAN AGRICULTURAL CONDITIONS.

STATISTICS OF THE CROPS AND LIVE STOCK IN THE DOMINION.

Consul-General John G. Foster, at Ottawa, in a report written July 11, quotes the following estimate of condition and official statistics of the crops and live stock for the Dominion of Canada, exclusive of British Columbia:

Field crops.	Per cent of stand-ard condition.	Acres in crops.	
		1908.	1907.
Wheat.....	83	6,512,965	6,063,718
Oats.....	90	7,942,943	7,405,509
Barley.....	85	1,746,911	1,736,779
Rye.....	80	98,739	109,140
Peas.....	82	413,082	403,500
Beans.....	74	60,213	65,407
Mixed grains.....	84	588,225	603,846
Hay and clover.....	86	8,209,562	7,726,335

Live stock.	Per cent of stand-ard condition.	Number of animals.	
		1908.	1907.
Horses.....	96	2,115,867	1,923,090
Milch cows.....	96	2,916,506	2,737,462
Other cattle.....	86	4,682,599	4,394,354
Sheep.....	82	2,825,604	2,783,219
Swine.....	85	3,365,375	3,445,282

The average standard of condition is high for all kinds of live stock, in particular for horses and milch cows, and for each kind, except swine, there is an increase of number.

ASIATIC SILK TRADE.**CHINA.****LARGE INCREASE IN EXPORTS OF NEARLY ALL CLASSES OF FIBER.**

Vice-Consul Ernest Vollmer, of Tsingtau, writes as follows concerning the Chinese foreign silk trade for last year:

Customs returns of the silk exportation of China show that the past year has been a good one, at least as far as the quantity is concerned. The present state of the market in north China is, however, not satisfactory. Large stocks of pongees have accumulated at Chefoo and Tsingtau, and even with a price far below any on record for the past few years there seems to be no market for Shantung pongees. The United States in 1907 maintained its place as a large consumer of Chinese silk. Hongkong took, roughly, three and one-half times the amount taken by the United States, and was by far the heaviest buyer; France came second with just twice our purchases; and the United States occupied third place.

STATISTICS OF EXPORTATIONS.

Consul J. C. McNally, of Nanking, furnishes the following statistics relative to the exports of Chinese silk in 1907:

The demands in this line were exceedingly good, and but for the financial crisis in the United States, which caused the collapse of the silk markets on both sides of the Atlantic, the demands would have absorbed the splendid crops of the silk-producing countries. The exports of silk and silk products from China in 1907 increased 25 per cent over those of 1906.

All qualities figured in the increase, except wild raw silk, which fell from 3,407,300 pounds in 1906 to 3,186,150 pounds in 1907. White raw silk increased from 3,628,959 pounds in 1906 to 3,801,515 pounds in 1907; yellow silk increased from 1,584,404 pounds in 1906 to 1,793,685 in 1907, and white filatures from 6,107,939 in 1906 to 6,704,457 in 1907, or within 39,900 pounds of the record year 1902. Waste silk, with 14,377,605 pounds, was 2,660,000 pounds more than in any other year of the silk history of China.

Silk piece goods and Shantung pongees showed substantial increases of 25 and 56 per cent, respectively.

JAPAN.**SILKWORM HATCHING AND THE SILKWORM INDUSTRY.**

Minister T. J. O'Brien, of Tokyo, transmits the following translation, made by Student Interpreter A. A. Williamson, of an article in a local newspaper concerning the silkworm industry of Japan:

At this season (May) the silkworms emerge from the eggs and considerable interest attaches to their number as compared with the hatch of previous years, as some estimate, with regard to the output of silk at the end of the season, may be made therefrom.

Of the 42 fus and refectures mentioned, 33 showed an increase in the production of worms and of mulberry leaves of from 10 per cent to 20 per cent; 9 were below average or the same as last year. Hokkaido suffered from bad weather, which spoiled the hatch somewhat and considerably damaged the mulberry sprouts. Frost and snow caused more or less damage to sprouts in 8 prefectures, and in Yamanashi Prefecture the mulberry fields were so washed out by the floods of last year that not much leaf will be produced this year;

yet Fukuoka Prefecture shows an increase of about 25 per cent, and in 7 prefectures the increase amounts to 20 per cent. In addition, the number of families engaged in the industry has been considerably augmented, so that, with the increase in the number of worms and the large yield of mulberry leaves expected, a good silk year is anticipated.

A YEAR OF GREAT ACTIVITY MARRED BY THE AUTUMN SLUMP.

Consul-General Henry B. Miller, of Yokohama, transmits the following article from a local newspaper reviewing the silk trade of Japan for the first eleven months of the year ended June 30, 1908:

One writer on economic subjects denies that the raw silk trade has been as unprofitable as is generally regarded. He points out that the arrival of silk at Yokohama during the eleven months to June last, the opening of the season, aggregated over 190,000 bales, which, added to the stock of old crop silk on the market, brought up the total to 204,000 bales. The total sales during the eleven months amounted to 182,500 bales, showing an increase of over 7,600 bales as compared with the corresponding period of the preceding year. Thus the sales can not be said to be unsatisfactory, and the greater part of the silk sold realized 1,000 yen per picul (\$498 per 133½ pounds). No greater activity of the market has ever been seen. Latterly, it is true, the market has become depressed, with heavy congestion of stocks and depreciation in price, but this is due to the depression of the market abroad, while the congestion of stocks is partly to be accounted for by a marked increase in the arrival of stocks at Yokohama. What this writer desires to show, apparently, is that had it not been for the heavy slump of the autumn the year would have been a phenomenal one, but this is scant consolation for dealers and producers who have lost more by the slump than they gained by the previous months of prosperity.

COLOMBIAN CROPS.

BRIGHT AGRICULTURAL PROSPECTS IMPROVE BUSINESS.

Consul Isaac A. Manning, under date of June 24, makes the following report from Cartagena on the good crop conditions in Colombia and the improving business outlook:

General reports received from points in this consular district, which covers the ordinarily rich regions of Savanas of Bolivar, valley of the Sinu River, and the basin of the Atrato River, indicate that prospects for excellent crops this year are far more favorable than they have been for several seasons. The Egyptian locust, which created such terrible ravages during the past three years, seems to have disappeared, temporarily at least, from the regions mentioned, and such plants as were threatened by this scourge on first sprouting now seem to have suffered not at all.

The prospects therefore seem good for abundant crops of corn, rice, cotton, and tobacco, the staples of this district, and should present prospects be realized economic conditions here will be greatly improved in a few months.

There has been also a general reduction in the exchange rate, and this is said to be the result of increased demand abroad for Colombian products, causing a more free offering of foreign drafts. There is a general feeling that conditions are improving and will continue to improve in Colombia.

VICE-CONSUL WALTER GASSETT sends from Kobe a Japanese newspaper statement that the statistics just published show a population of 1,172,138 in Osaka at the end of 1907. This is double that of ten years ago.

PUBLIC IMPROVEMENTS IN ARGENTINA.

RAILWAYS, HARBORS, BUILDINGS, WAR SHIPS, AND WAR MATERIALS.

The following information concerning public improvements, proposed and under way, in Argentina, is taken from the *London Economist* of July 11, 1908, as supplied by its Buenos Aires correspondent:

The Government is urging Congress to sanction the sale of the Andine Railway, in order to provide the funds for completing the other state railways, for purchasing rolling stock for the Central Northern Railway, and for renovating the permanent way of that line. It is estimated that the total expenditure upon these railways, including the payment of the certificates for work done before May 31, will exceed £2,500,000 (\$12,166,250).

On Wednesday, June 10, the Chamber of Deputies passed the bill, which had been sanctioned by the Senate in 1906, whereby a concession is granted to the Southern Railway Company for the construction of nine branches and extensions of the total aggregate length of 1,330 kilometers (826.42 miles), the most important, and one of those which is required to be first completed, being the extension of the Neuquen line to the Chilean frontier in the Cordillera.

EXPENDITURES FOR BUILDINGS AND SHIPS.

Two American companies have secured the contracts for locomotives for the state railways for the aggregate amount of \$663,000 gold. Tenders have been received for supplying river steamers, barges, steam launches, and tugs to the amount of \$600,000 gold. Tenders were also received from nine firms for supplying a suction dredge for the bar at "Punta de Indio," at the cost of \$400,000 gold, but by decree of the 10th instant they were all rejected for noncompliance with the conditions, and new tenders are to be invited, one of the conditions being that a fine of \$50,000 gold will be imposed if the dredge supplied should be rejected for nonfulfillment of the stipulations.

Another important item of expenditure will be £1,000,000 (\$4,866,500) on barracks in the capital and the provinces, 41 in all. These are urgently needed, for at present the soldiers are miserably housed. The jails, also, have to be enlarged, and the lunatic asylums, for all are disgracefully overcrowded. The new law courts can not be finished for less than £500,000 (\$2,433,250); the Congress building will require more; the new post-office, of which the foundations were laid twenty years ago, is to be erected at a cost of three or four millions of dollars, according to the plans prepared by the French architect, Maillard, who has come here to direct the works, and who has suggested a decided improvement, viz, the raising to the level of the central streets, which would give access to the new building. This, of course, will be an expensive work. Then, a very large expenditure is contemplated in enlarging the port. In the construction of more custom-house warehouses, and upon the formation of the "free zone" in La Plata port.

The Minister of Marine clings to the idea of the purchase of two battleships at the cost of £3,600,000 (\$17,519,400), and he insists upon the urgent necessity of providing for the defense of the River Plata by the acquisition of ten "destroyers" of 650 tons each, and twenty of smaller size for the river. These vessels would cost £2,000,000 (\$9,733,000), and he proposes to spend £1,000,000 (\$4,866,500) more on guns, electric apparatus, etc. The Minister of War asks for about £1,500,000 (\$7,299,750) additional in armaments for an army of 150,000 men. (The permanent army, consisting chiefly of conscripts called out for a year's service, numbers 20,000 men.)

Spanish Chair Endowed in University of Liverpool.

Consul-General Frank D. Hill, of Barcelona, writes that an Englishman acquainted with Spain has just endowed at the University of Liverpool a chair of the Spanish language, the amount donated being \$50,000. Mr. Hill comments:

Spanish is the modern language that is, and will daily become more so, most useful to the American people, and this example may well be commended to friends of education in the United States.

BELGIAN DUSTLESS ROADS.

ROAD BUILDERS SEEKING TO ELIMINATE THE DUST NUISANCE.

Consul Abert Johnson, of Liege, calls attention to the experiments that are being made to produce a dustless road for the country districts of Belgium. He says:

The increasing popularity of the automobile in Belgium has given rise to serious study on the part of the department of public works of the problem of rendering the highways of the Kingdom dust-proof. Specialists are not agreed as to the most efficacious and economical method of combating the dust nuisance. Various experiments have been carried on with different substances for testing their relative merits, but the results have not been satisfactory, and the commission of public roads are of the opinion that future experiments will result in the discovery of some material better adapted for the purpose than any that has yet been tried.

During the famous autocar tests last year in the Ardennes the entire circuit was treated with tar, and this process of dust elimination proved highly satisfactory to the automobilists. The beneficial effects, however, of this tarring process were of rather too short duration, considering the expense entailed—7 centimes (1½ cents) per square meter. As in this case all of the expenses were borne by the organizers of the auto tests, the Government was enabled to profit by the experience without the necessity of any outlay on its part. In these tests it was demonstrated that while the effects of this tarring process lasted it proved satisfactory, but the beneficial effects were hardly lasting enough to warrant its use throughout the country. The minister of public works has in hand a number of substances that lay claim to the title of dust preventatives, and it is proposed to carry on experiments with a view to testing their efficacy during the present summer.

In view of the fact that this question is being agitated in certain sections of our country, it may be worth while for some American inventor or manufacturer of antidust substances to ask the Belgian department of public works to give his production a trial.

Commercial Treaties Affect Magdeburg's Trade.

Vice-Consul James L. A. Burrell states that the Magdeburg Chamber of Commerce in a report just published claims that various branches of German industry have been seriously injured by the new commercial treaties. The export of machines to Spain, Austria-Hungary, Russia, Italy, and Roumania has decreased on account of the higher duties provided for by the treaties, which have also made impossible the exportation of dyestuffs to the countries named, as well as to France. The export of paper goods is restricted to Holland and England and the export business of the husking mills to Russia has been reduced to a minimum on account of the high duty.

CONSUL LESTER MAYNARD sends from Sandakan a newspaper clipping relating to the reorganization of the coal company operating the only independent mining concession in the island of British North Borneo. The company's output of coal is increasing. It is to be newly formed at Hongkong with a nominal capital of \$1,575,000 gold.

OPENINGS IN GERMANY.

A MARKET FOR WRITING PAPER, UMBRELLAS, AND TOILET ARTICLES.

Consul Albert Halstead, of Birmingham, transmits the following extract from the report of the British consul at Stettin, Germany, calling attention to the opening in that place for certain manufactured articles:

An increasing number of manufactured articles of British origin are exposed for sale in Stettin. Unfortunately only a few of the better-class shops deal in these articles, the principal of which are tweeds, cashmeres, and other similar cloths, felt hats, umbrellas, gloves, traveling rugs, soaps, scents, preparations for the toilet, boot polishes, some few articles of silver, and high-class writing paper from a well-known mill in Kent. In the past year, apparently for the first time, small leather articles were to be seen in saddlers' shops. The demand for athletic and similar goods (principally for tennis and football) is evidently on the increase. In addition to the several dealers already importing these articles, one shop now deals exclusively in them. Mackintoshes, formerly almost unknown, are now frequently seen, and it is probable that when they become known a good sale may be found for them. The prices charged for writing paper and envelopes are considerably in excess of those paid in the United Kingdom for similar or even superior qualities. These are usually sold in cardboard boxes containing 100 sheets and envelopes. The consul compared a sample of paper sold in Stettin (blue tinted to imitate lines), costing 2 marks 50pf. (59½ cents) per box, and found it identical in appearance with some retailed in the United Kingdom at 1s. 8d. (40 cents) for the above quantity. Should the import duty of 12 marks (\$2.85) per 100 kilos (\$1.45 per 112 pounds) on paper and envelopes in cardboard boxes not prove prohibitive, it should not be found difficult to introduce many makes other than the one now selling, but it would be necessary to deal direct with the retailers.

[Similar articles imported from the United States pay \$5.24 per 100 kilos.—B. of M.]

Consul Halstead adds that if there are these openings in Stettin and throughout Germany for the British articles mentioned, there should be similar openings for all those articles which are made in the United States, especially for umbrellas, soaps, scents, preparations for the toilet, boot polishes, and high-class writing paper.

MEXICAN NOTES.

Consul Thomas W. Voetter sends from Coahuila the following Mexican industrial items:

Some study is being given to the production of beet sugar in the State of Coahuila, and a petition has been presented to the governor asking exemption from municipal and State taxes on \$249,000 gold which may be invested in sugar factories.

The company Luz Electrica y Fuerza Motriz de Monclova, S. A., of Monclova, Coahuila, has been granted exemption from payment of municipal and State taxes on \$18,000 gold to be invested in additional machinery to produce ice. Garza Hermanos has also been granted a concession for establishing a \$5,000 ice factory at Allende.

The governor of Coahuila, acting for the town of Sabinas, Coahuila, has entered into a contract with Joaquin G. Rodriguez for installing a system of waterworks in that town. This will be a work of some size and may offer opportunities for sale of pipe and plumbing supplies of all kinds, as one of the articles of the contract provides that the authorities of the town shall oblige the owners of property to make proper connections and to use the water supplied by the new system.

FOREIGN TRADE OPPORTUNITIES.

[Inquiries in which addresses are omitted are on file at Bureau of Manufactures. In applying for addresses refer to file number.]

Consuls are requested to contribute to this department.

- No. 2529. Panama Canal supplies.**—Proposals will be received until August 31, 1908, by the Isthmian Canal Commission, Washington, D. C., for the supply of cable railways with grip cars, electric railways with motor cars, traveling cranes, and stone, sand, and cement valves. (Circular No. 460.)
- No. 2530. Cranes.**—The Auckland (New Zealand) Harbor Board calls for tenders for the supply of 16 electric cranes. Tenders should be submitted by October 1 to Messrs. W. & A. McArthur, Ltd., 18 to 19 Silk street, London, E. C., England, from whom also specifications and diagrams may be procured.
- No. 2531. Heating and ventilating apparatus.**—Tenders will be opened November 1, 1908, at the Ministry of Public Works, Rome, Italy, for the installation of heating, ventilating, and cooling apparatus in the new Chamber of Deputies at Rome. Plans and specifications may be obtained from the Bureau of Civil Engineers, Via della Pilotta, Rome, Italy. Local representation is necessary.
- No. 2532. Dredger, steam tug, and lighters.**—Tenders are invited by the Direction Supérieure de l'Intérieur, Ile de Crète, Canea, up to September 28, 1908, for the supply of a dredger, a steam tug, and two lighters.
- No. 2533. Electric railways.**—Bids will be received until September 25, 1908, by the Dirección de Obras Públicas, Madrid, Spain, for the construction and operating of electric "tramways" in Madrid. A deposit of 5,185 pesetas (peseta=19.3 (gold) cents) must accompany all bids.
- No. 2534. Laundry machinery.**—An inquiry has been received by an American consular officer in one of the Latin American countries for information regarding prices, discounts, and catalogues of boilers and electric laundry machinery. This machinery is to equip a new establishment.
- No. 2535. Handles for corkscrews.**—An American consular officer reports that a business firm in the European country in which he is stationed has applied to him for the names of American manufacturers of handles for corkscrews. This firm can use only a handle which has been varnished in such a manner as to give the appearance of its having been enameled black. A sample handle, which he forwarded, has been received and will be loaned by the Bureau of Manufactures.
- No. 2536. Machinery for making corn starch.**—A man in Europe, who is about to erect a factory for making corn starch, has applied to an American consular officer for information from American makers of such machinery, or from specialists in the making of corn starch.
- No. 2537. Leather.**—An American consular officer in Europe forwards the name of a man there who would like to correspond with firms in the United States relative to the purchase of American leather for the manufacture of shoes and gloves.
- No. 2538. Candles.**—An American firm in one of the West Indies has notified a consular officer there of its desire to represent some American manufacturer and exporter of candles.
- No. 2539. Fresh fruit.**—An American consular officer in one of the South American countries reports that a business firm there desires quotation on fresh fruits, such as Malaga grapes, cherries, etc., to be packed in cork dust and forwarded by parcels post.
- No. 2540. Paper for news printing.**—Correspondence relative to paper for news printing is desired by an European merchant who has so informed the American consul located there.

THE Geological Survey announces that the world's production of zinc spelter in 1907 was 813,842 short tons, against 775,871 tons in 1906. The United States was the only country with a large increase, having advanced from 224,770 tons to 249,842 tons. Belgium produced in 1907 170,307 tons, and Silesia 152,611 tons, both slight increases.

CHILEAN TRADE NOTES.

Consul Alfred A. Winslow, of Valparaiso, transmits the following trade notes and items of information:

The University of Chile has adopted a course for the special instruction of persons for the diplomatic and consular service. The course is quite complete.

The question of good roads for Chile is receiving much attention of late. It is recognized that good roads are an important factor in the development of the country and in the cost of farm products in the populous centers.

In Chile all saloons and places where spirituous liquors are sold must now be closed from 7 o'clock Saturday night until 6 o'clock Monday morning, and all public holidays are treated the same as Sunday in this respect.

The Sociedad Altos Hornos de Chile is crowding work on their new extensive steel plant near Corral. Fifty cottages have been constructed for workmen, and 6,000 barrels of cement were lately received at one consignment.

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GERMANY.

GROWTH OF A BERLIN PLANT—COST OF PRODUCTION—WAGES AND ALLOWANCES—BENEFICIAL ORGANIZATIONS.

Special Agent Roland R. Dennis, under date of July 14, describes a visit to the works of H. F. Eckert & Co., at Lichtenberg-Berlin, and explains certain items of expenditure which are required of German manufacturers and which materially contribute to the cost of production. The report follows:

Upon invitation of Mr. William Turcke, general manager, I was accorded the privilege of visiting the works of H. F. Eckert & Co., of Lichtenberg-Berlin, which was started by Mr. Eckert in 1845 in a very small way. In the sixty-two years of its existence it has become the third largest manufactory of agricultural implements in Germany, employs over 1,000 men, the works cover an area of nearly 15 acres, and it has a working capital of about 6,000,000 marks (\$1,428,000). Its output is genuinely German, in the fact of its covering a large list of diversified goods. Its principal line is plows, of which almost everything is furnished except disk and riding patterns; also spring-tooth harrows mounted on wheels, spike-tooth harrows in many different styles, land rollers, grain drills of all classes, hay rakes, hay tedders, potato diggers, root and food steamers, some with a capacity of 780 pounds of potatoes at one filling, grinding mills, oil-cake breakers, root cutters, portable hay and straw elevators, and hand presses. For the season of 1908 they have taken up mowers, reapers and binders, and are making a good beginning in these lines. In addition to manufacturing all of these strictly agricultural implements, they have large contracts with the German Government for artillery gun carriages and caissons.

WORKING HOURS AND WAGES.

The working hours at Eckert's are from 6.30 to 8.15 a. m., 8.30 to 12, 1 to 4 p. m., and 4.15 to 6 p. m., making ten hours per day; Saturday they work from 1 to 5.15 p. m., making a week's work of fifty-nine and one-half hours. The point that first interests our American manufacturer is starting at 6.30 a. m. The workmen have a cup of coffee and some bread before leaving their homes. At the morning pause of 15 minutes they take a sandwich from the work's canteen.

At the noon hour the workman, if he lives in the neighborhood, goes home to dinner. If his home is at a great distance his wife brings his dinner, consisting of cold meat or sausage, bread, and usually a bottle of beer. For the afternoon pause they generally take a cup of strong coffee and a sandwich. Whatever may be thought of this system, I must admit that there is a great deal in its favor. In the fact of the man's having a "breathing spell" in the midst of his five hours work, and that he at the midday pause does not need so much food, he is in a better condition to go on with his afternoon's work.

I learned that "schlossers" (what we would call benchmen, working at a vise) are paid at the maximum 0.65 mark to 0.70 mark ($15\frac{1}{2}$ to $16\frac{3}{4}$ cents) per hour; lathe and drill hands 0.55 mark (\$0.131); smiths 0.52 mark (\$0.124); common laborers 0.35 mark (\$0.083). So far as possible the entire works are run on a piecework basis, the week's wages varying from 46 to 60 marks (\$10.95 to \$14.28). Saturday of each week is pay day, the entire works being paid up to and including the previous Tuesday.

These works have an excellent plan of controlling the cost of all their products by keeping a very sharp control of the average cost per hour of their skilled labor, which average at present is 0.498 mark (\$0.1185). The general average of all labor is 0.481 mark (\$0.1145) per hour.

INDIRECT CHARGES.

The indirect charges in a German factory that must eventually go to wages account, amount, in round figures, to about 65 or 70 per cent of the actual wages paid. The first charge is the Government tax for accident insurance, which is about 4 per cent of wages paid. Then comes a relief fund, to which each workman pays 0.27 mark (\$0.064) per week, and the works are required by usance to pay in the same amount. From this fund 100 marks (\$23.80) is paid for funeral expenses. In case of sickness relief can be had for thirty-nine weeks. If the sick man goes to a hospital his wife is granted 9 marks (\$2.14) per week. The works also have their own accident insurance fund, the claims on which are varied much the same as are those of American accident insurance companies. The pension fund also takes a great deal of money, an employee, whether disabled by accident or sickness, being entitled for three years to relief up to the amount of pay he was earning when in health. The jubilee fund is available for anyone who has been in the employ of the company continuously for 25 years. A helping fund also exists, from which men in case of unusual expenses at home can borrow from 15 marks (\$3.57) to 30 marks (\$7.14). Anyone having been in the company's employ for 25 years draws from 35 marks (\$8.33) to 125 marks (\$29.75) per month, according to the class in which he has worked. Then a savings fund has been instituted, to which the company pays in the same amount as the workman, but an employee to be eligible for membership must state that he is not connected directly or indirectly with any labor union. The company guarantees a good rate of interest, and regard this as one of the best investments they make. In reply to an inquiry as to the men appreciating what was being done for them, Mr. Turcke replied: "About one-third of the number seem to fully appreciate our efforts in their behalf, one-third are unconcerned, and the balance are 'floaters.'" These various charitable schemes, which are virtually

forced on manufacturer by precedent, necessitate a paying out of an amount equivalent to about 65 to 70 per cent of the actual wages paid.

The canteen in connection with the works is leased to a local restaurateur, in which the employees can get a simple lunch as well as beer. No spirituous drinks are permitted. A card of prices, indorsed by the general manager of the works, is posted in the canteen, and only such items as are noted thereon, and at the prices given, can be served. Beer is quoted at 10 pfennigs (\$0.0238) for pint bottles, and coffee at 5 pfennigs (\$0.012) per cup. The rental derived from the lessee for this privilege is paid into the relief fund.

HAMBURG.

PROGRESS IN MANUFACTURE—FARM MACHINES MADE—SHOP EFFICIENCY.

Special Agent Roland R. Dennis, writing from Hamburg July 15, describes the progress Germany has made the past twenty-five years in the manufacture of farming machinery. His report follows:

No better evidence of the great progress made in the last quarter of a century by Germany in manufacturing can be found than to compare the present size of some of its principal works with their condition in the early eighties. Recently I was permitted to visit the plant of Heinrich Lanz at Mannheim, with the founder of which I was well acquainted. In its early days the establishment employed perhaps 150 men. At shows and markets Mr. Lanz took off his coat and superintended the setting up of the machines to be exhibited. He was especially popular with Americans, his early connection with the agricultural machinery business having begun in 1859 as agent for American and English makers. Beginning with manufacturing small thrashers and lever horsepowers, Mr. Lanz soon took up large machines and portable engines and began his successful fight with the English manufacturers of these goods. During the seventies and well into the eighties, four or five of the north of England works supplied nine-tenths of the thrashers and portable engines sold on the Continent. To-day these figures are reversed, at least so far as regards Germany, and the firm of Heinrich Lanz has works that compare most favorably with any of their class in the world, and has built up a business that keeps the works busy. February 1, 1905, Heinrich Lanz, the originator of this great enterprise, died, and the business is now carried on under the same firm name by his widow and only son.

EFFICIENCY OF THE SHOPS.

Taking a point from the United States, Mr. Lanz was much more of a specialist in his manufacturing than almost any of his German fellows. The catalogue shows engines, portable and stationary, steam thrashers, straw presses, small thrashers for horsepower and hand driving, horsepowers, straw and root cutters, and lately they have added milk separators. An entire afternoon was spent in a detailed visit to these works. Everything had been thoughtfully arranged, so that upon reaching any of the great tools, of which there were very many, the workmen were ready to show their workings. Hydraulic presses up to 500 tons pressure, by the usual system of accumulators, were extensively used, and some entirely new combinations in this direction were shown. Bulldozers of all sizes

abounded, and while maker's name was not found on any of the tools, with the exception of one English press, some of them suggested Moline. This similarity of patterns was also very pronounced in the woodworking department, planers, boring tools, etc., bringing to mind Worcester and Cincinnati. In this department a wind exhaust system was installed, delivering the sawdust and shavings under the boilers. Electric driving is installed in nearly every room of every department, and all additions now being made are arranged on this basis. One set of dynamos are generating a 3,000-volt current for transmission to the old works situated some distance from the principal establishment.

Twelve engines built in the works deliver by electric current 4,500 horsepower to the establishment. For heating the building and furnishing steam to the hammers 11 boilers are used. The foundry has 7 cupolas, and is well fitted with molding machines. A compressed-air plant of 100 horsepower is installed here, and 4 electric cranes handle the heavy work. The laboratory, upon which much money has been expended, is very complete in its fittings, and seemed to be most thorough in its investigations. The railroad department is equipped with 4 locomotives and 75 cars. They claim to have shipped in 1907 their thirteenth thousand thrasher and twentieth thousand engine.

LIBERAL PROVISION FOR WORKMEN.

I quote a few statistics given me by Doctor Schnellbach, the historian and statistician of the establishment: Business founded in 1860 with 2 employees; in 1870 the employees numbered 83; in 1880, 398; in 1890, 1,234; in 1904, 2,571; in 1907, 3,723. These last figures do not include the members of the different technical and sales departments, who number 580.

The following interesting figures relate to the philanthropic works of the founder: In 1898, on the sixtieth anniversary of his birth, Mr. Lanz added 1,000,000 marks (\$238,000) to the funds of the long-established relief association of the works. On August 15, 1897, a fund for the unemployed was founded with a capital of 20,000 marks (\$4,760), which, aided by subsequent payments by the firm, had increased at the end of 1907 to 131,200 marks (\$31,226). Owing to the continued prosperous times there has scarcely been an appeal made to this fund.

A fund for the welfare of the office officials, superintendents, and foremen, which was founded with a capital of 100,000 marks (\$23,800), inherited 4,000,000 marks (\$952,000) by Mr. Lanz's will. In 1905 Mrs. Lanz added 500,000 marks (\$119,000), and this year she donated a further sum of 1,000,000 marks (\$238,000). In addition to all of these a savings bank has been established since 1898, in which employees may deposit the smallest amounts, being granted a liberal rate of interest.

RUSSIA.

IMPORTS OF AGRICULTURAL MACHINERY.

The British consular officer at St. Petersburg, reporting on the agricultural machinery trade in Russia, states that the provincial associations for the cooperative purchase and sale of agricultural machinery and implements are continuing to extend their operations,

and that German manufacturers and British firms, the latter to a less degree, have been able to secure a fair amount of business. The total amount of such machinery and implements imported into Russia in 1907 from all countries amounted to \$8,931,818, an increase of \$959,469 over that of 1906. The imports from Germany during the same period amounted to \$3,273,388, or over one-third of the whole trade, and were, moreover, in excess of the imports from that country in 1906 by \$1,014,621. The imports from the United Kingdom amounted to \$1,172,569, an increase over those of the previous year of \$309,918. [The report as published in the British Board of Trade Journal fails to mention Russian imports of American agricultural machinery. It may be added that the exports of such implements for the calendar year 1907 were worth \$4,353,523, against \$4,673,243 in 1906.—B. of M.]

YUKON MINING PROGRESS.

MODERN DEVELOPMENT CALLS FOR EXTENSIVE MACHINERY PLANTS.

Writing of the opportunity for the sale of mining machinery and equipment in the Yukon near Dawson, Consul George W. Shotts, of Sault Ste. Marie, advises that the Canadian Mining Journal of July 15 has this to say:

Canada may look forward to the Yukon as a future field for the sale of large quantities of first-class mining equipment. The country has evolved rapidly from the days when wood fires and the boilers and hoists were the only apparatus needed in working the ground for the placer deposits. Quartz mining is beginning, but placer is the chief industry.

Scores of extensive large method mining plants have been installed in the Klondike since the region began to emerge from the old conditions of individual operations. The investment in dredges and hydraulic equipment have reached many millions of dollars and this line of enterprise seems scarcely more than begun. In connection with the dredges extensive outlay has been necessary for steam and water power plants for generating electricity with which the dredges are driven. For each hydraulic plant long ditch lines are often necessary, necessitating in many instances great outlay for pipe material for siphons, to say nothing of hydraulic plants and the other parts, aside from lumber for flumes, penstocks, and such. The new style of electrically driven elevators or lifts handling tailings from ground being worked by hydraulic on the creek bottoms also calls for considerable mechanical equipment.

The framework of the lifts are entirely of steel, and carry a steel bucket line, similar to a dredge, and are equipped with two large centrifugal pumps to each lift, for handling of water from the sump to the tailing boxes. The hydraulic plants used for washing the gravel down to the lifts are akin to the hydraulic plants used in the operation on hills.

The electrical equipment for conveying power is one of the largest items of expense. Lines from a quarter of a mile to 60 miles long are installed, already conveying power, and heavy wire and transforming stations add to the quantity of equipment materially.

In connection with each line is the generating equipment in the form of dynamos driven by turbines or steam plants. Some of the dredges are supplied with power from steam boilers aboard the craft, but the larger concerns have their steam or power plants ashore and electrical lines with which to convey the electricity to the dredges. The several big companies branching out are planning the installment of extensive power plants of the most modern character. The power will be generated from the vast natural water courses and conducted over hills and valleys with copper wire. The many new hill groups organized for working hydraulic plants will demand much more new equipment before long.

Flumes, ditch-line and pipe-line material, and plants and such, will come largely into demand as a consequence. The prospecting of the dredge ground also makes a demand for more modern equipment in the way of large drilling machines.

SINGAPORE A TRADE CENTER.

CHINESE ARE BONE AND SINEW OF THE COMMERCIAL COMMUNITY.

The following translation from an article on the Straits Settlements and Federated Malay States, published by the German Government, emphasizes the importance of Singapore as a distributing center for European and American manufactures and as a point of departure for the tropical products of that region; but the most instructive feature of the article for anyone desiring to understand the organization of commercial society in the Orient is the reference to the Singapore Chinese traders and their business methods:

Singapore owes her eminence as an import and export market to her position and to a liberal government policy. Besides a large number of smaller places throughout southern Asia, the East Indies, and northern Australia, such cities as Bangkok, Saigon, Batavia, and the Philippine Islands are largely dependent on Singapore. These cities get their manufactured wares from Singapore, and thither they send their raw or hand-made products for transshipment to Europe, to China, and to America.

The business man in commercial undertakings in this part of the world must know who the men are and what methods they employ in effecting the exchange of products in one of the greatest marts of the world. The Europeans control the wholesale trade with Europe, America, and Australia, and the Chinese and Indians control that with China and the East Indies.

THE CHINESE TRADERS.

Chinese merchants or middlemen are the chief buyers of manufactured wares from the local European wholesaler. These wares are distributed far and near to the large Chinese and native populations, from whom in turn are collected the raw products of the sea, the jungle, the plantation, the forest, and the mine, and brought to Singapore and disposed of to the European exporter. On account of their perseverance and skill in driving a good bargain in the purchase and the sale of goods the Chinese have become an important factor in the trade of the city. Almost the entire colonial trade of the Straits Settlements is in their hands; a considerable portion of this trade is with their own countrymen. These Chinese merchants are the connecting link between the wholesale importer and the individual consumers, and between the individual producers and the wholesale exporters. The small traders are chiefly new arrivals from the Celestial Kingdom. Their special characteristics are unperturbed pursuit of their purpose and adaptability to their surroundings. They drive a hard bargain with the Malay and still hold his confidence. They are as indispensable to the latter in the purchase of his raw products as they are to the European importer for the distribution of his wares. They are disposed to restrict their trade to articles for which there is an established demand, and make little effort to introduce new goods.

There are not a few cases where Chinese have become wholesalers both in imports and exports. They are strongly inclined to deal in futures, and on account of limited means often lose everything.

Although the Straits-born Chinaman, by virtue of his knowledge of their language and customs, understands the Malaysians better than the recent arrival from China, nevertheless the latter handles the greater part of the retail trade; the former usually acts as middleman between the European wholesaler and banker on the one hand and the Chinese dealers who lack a full knowledge of local conditions on the other. He is also frequently a money lender, and the fact that he often figures as a partner in important commercial or industrial undertakings when he is only a money lender to the project adds much to the uncertainty and instability of Chinese trade. His inclination to deal in futures is responsible for the fact that Chinese fortunes frequently change hands and that many coolies are descended from millionaires.

The Chinese are also producers. In the tin industry they rank first, owning about 80 per cent of the mines of the Malay peninsula. They are also leaders in the production of tapoca, gambler, pepper, and pineapples. The preparation of sago for the European market and the canning of pineapples are

monopolized by them. In the lumber and hard-wood business no other nationality has a single house of importance. Just as the Chinese trader is the backbone of the colony's commerce, so is the coolie the backbone of the tin and plantation industries in the Straits Settlements and the Federated Malay States.

DEPENDENT ON CREDIT GIVEN BY EUROPEANS.

Siam receives 70 per cent of her imports via Singapore, and the latter city, next to Hongkong, is the heaviest purchaser of Siamese rice. This trade is carried on exclusively by Chinese. The Chinese wholesaler in Singapore buys manufactured wares from the resident European importer on two to three months' credit. He sends the wares to his customer, usually a business associate at Bangkok, in whose firm he holds an important interest. The Bangkok trader disposes of the wares, and with the proceeds purchases rice and other raw products from the native planters, and after hulling the rice, he forwards it to the wholesaler at Singapore, who sells it to the European exporters, and then settles for the wares he sent to Bangkok. It will be seen that the Chinaman thus carries on a lucrative business on the credit extended him by the European importer. The export firms on the other hand pay cash for the raw products they buy from the Chinese.

Next to Bangkok Palembang, of Sumatra, has been Singapore's best customer, but in recent times this trade has been on the decline. In 1903 the import trade was in the hands of Chinese, but since 1905, on account of their greater activity, the Indians and Arabs have taken the lead. A few European houses have established themselves in Palembang and are engaging in direct importation from Europe. Naturally, however, the city is still in great part dependent on Singapore, because the local houses can not compete with the Singapore houses in staple articles of commerce. Besides, the Arabs and Indians are satisfied to sell at a closer margin than their European competitors. Added to this is the fact that many of the local Arabian and Indian firms are controlled from Singapore.

THE ARABIAN TRADERS.

The Singapore Arabs do a purely commission business with affiliated firms in Sumatra, Java, and Borneo. They have no customers in the city, and have no stores or warehouses. The goods purchased from Singapore wholesalers are immediately shipped to their clients, upon whom they draw through the banks. They deal chiefly in cotton piece goods, of which the sarong is the most important article. Their chief customers are Malays and Javanese in the Dutch East Indies.

Borneo and the peninsula of Malacca look to Singapore for their imports and for the sale of their jungle and plantation products. Moreover by virtue of the coasting trade heading out from Singapore, they are closely bound to the latter city. The Chinese merchants of these districts are oftentimes branch firms of Singapore wholesalers, from whom they receive wares and rice for which they sometimes pay in cash, but chiefly in jungle and plantation products. Besides these are the small Chinese traders and shopkeepers who are dependent on the credit extended them by their countrymen in Singapore. The trade of the peninsula of Malacca is controlled exclusively by Chinese.

Usually the Chinaman in the Straits Settlements begins his business career in a small way. As an immigrant he brings with him enough money to purchase an ox cart full of goods, consisting of rice, salt, salted fish, tobacco, petroleum, matches, sugar, small manufactured wares, and pottery. With these goods he betakes himself to some remote native settlement and opens a shop. He deems it wise to distinguish between local officials and the rest of the population by granting to the former credit at his store. His shop is soon made the rendezvous of the natives who while away their time at his place of business and patronize him in a limited way. He trades his wares for jungle product at exceedingly advantageous rates. After he has accumulated half a dozen cart loads of valuable products he disposes of his shop and departs for the nearest shipping port, where he disposes of his goods and then settles down in some more pretentious business.

WILL THE CHINESE OR EUROPEANS WIN OUT?

The European tradesmen are asking themselves to what extent the Chinese will be able within the near future to destroy the present method of trade in the Orient by becoming direct importers from Europe and America. For some time they have been gradually entering into this import trade. The Chinese

employees of European houses learn business methods and the language of their employers and afterwards become competitors in the same line of business. Manufacturing and commission houses already send their traveling representatives to Chinese and other firms of Orientals. As far as Germans are concerned, such business relations have not been profitable. This development of new trade relations is continually forcing the European importers to content themselves with smaller commissions, while the native houses are growing more powerful and more dangerous as they are awakening to independent endeavor.

The Straits Chinese are not only engaged in trade, but in commerce. The Singapore and Perang Chinese are engaged in tin and other important industries. Nevertheless there is one essential distinction between their business methods and that of the Europeans. As yet the Chinaman can not bring himself to close a bargain with a stranger by mail or cable. He must trade with an acquaintance or one introduced and vouched for by a trusted friend. This conservatism is still evident with the wholesaler and the millionaire.

TRADE OF BIRMINGHAM.

SHOWS A SHARP DECLINE AS COMPARED WITH FORMER YEARS.

Consul Albert Halstead, of Birmingham, makes the following report on trade conditions, in which he shows that the depression felt in that consular district is general throughout the United Kingdom:

For the first half of the year 1908 conditions in the Birmingham consular district were much less favorable than for the similar period of 1907, when business was active and the trade outlook was more favorable than it had been in years. Taking the industries of the district as a whole, the half year has been unsatisfactory, and manufacturers are disposed to look with considerable gloom upon the future, for each month has shown a less hopeful prospect.

The reductions in exports from the United Kingdom, as shown by official returns issued by the British Board of Trade of 9.15 per cent, in imports of 7.91 per cent, and reexports of 23.76 per cent, while showing the depression throughout the Kingdom, give a fair indication of conditions in the Birmingham district.

EXPORTS TO THE UNITED STATES FALL OFF.

The fall in the values of exports from this consular district to the United States, noticed in the first quarter of the year, continued in the second. For the first half of the year the total value of exports was \$1,196,703, a loss of \$335,013 and of \$351,469, respectively, compared with corresponding periods of 1907 and 1906. The number of invoices fell off by about 21½ per cent. For the Birmingham consulate alone the total value of exports for the first half of the year 1908 was \$847,569, a reduction of \$251,155.

Following are the values of the most important shipments from the district for the first half of 1908, showing the decreases compared with the first half of 1907: Needles \$127,129, decrease \$84,104; leather goods \$66,123, decrease \$20,823; chemicals \$63,465, decrease \$107,866; saddlery \$51,407, decrease \$39,746; pens \$51,063, decrease \$22,376; hardware \$44,139, decrease \$19,736; watch jewels \$42,816, decrease \$4,746.

In the following important shipments increases are shown for the first half of the year in comparison with the like half year of 1907: Fishing tackle \$108,965, increase \$12,235; fancy goods and small wares \$102,851, increase \$6,602; glass \$100,233, increase \$7,102; gloves \$48,528, increase \$38,610; cotton goods \$42,282, increase \$8,001; earthenware \$24,869, increase \$21,318.

CEYLON TEA INDUSTRY.

RISE AND PROGRESS OF AN IMPORTANT PLANTATION INTEREST.

Consul E. A. Creevey, of Colombo, reports that the cultivation of tea, which was first seriously undertaken in 1873 because of the destruction by blight of the previously highly remunerative coffee groves, has now become the most extensive and productive of the capitalized industries of Ceylon. The consul's thorough review continues:

In 1873 but one lot of tea, weighing 23 pounds, was exported. In the calendar year 1907 the weight of tea exported was 179,844,827 pounds. The first considerable plantings of tea were made as a despairing effort to recoup fortunes which had vanished with the spread of the coffee blight. Men who had been in affluence had found their source of income suddenly swept away. The amateur tea planters had proved that tea could be cultivated profitably, but quicker and more easily earned profits were sought. These were found in cinchona, but in a few years the production of cinchona was so great as to flood the market and reduce prices below the profit limit. Then tea was given its opportunity.

The first great impulse given the industry was in 1875, when the acreage was increased from 350 to 1,080. Each succeeding year has witnessed extended planting, and at the end of 1907 planters' returns showed a total tea acreage of 385,000. In addition, there are numerous small gardens of tea cultivated by natives of the island who have other interests.

GREATER CROPPING ADVANTAGE—PLANTATION OPERATIONS.

The tea-planting enterprise has been found especially profitable in Ceylon because, while the shrub is deciduous in its native soil and there "flushes" only between May and November of each year, it is perennial in the hot climate of Ceylon, and the only interruption of its yield of leaf is in the pruning periods, once every two years. This interruption lasts not longer than six months. The Ceylon planter therefore in twenty-four months secures the returns of eighteen months' plucking, as compared with twelve months' plucking secured by the Indian, Chinese, or Japanese planter in the same length of time. Tea grows with almost the same productiveness in the lowland and mountainous portions of the central, western, and southern provinces of Ceylon, where the rainfall is abundant.

About 1,200 Europeans are employed as managers and assistants in the operation of the various estates and factories. The plantation labor is performed by about 400,000 Tamil coolies and women, imported from the Malabar coast. Their daily wage rate varies between 25 and 35 rupees (8.33 and 11.66 cents). In addition to their wages the coolies are housed on the several estates and are furnished rice at cost price. Several thousand native Cingaleses find employment in the transport of tea to the railways and estate supplies from the railways, but a very few of them work on the estates, as they prefer working their buffalo teams for hire or the cultivation of their own rice fields to day labor.

LABOR DIFFICULTIES—OVERPRODUCTION.

Recently the development of rubber plantations in the Federated Malay States and in portions of southern India has so increased the

demand for Tamil coolie labor that Ceylon tea planters have found the labor supply inadequate. The condition has become so acute as to require the appointment of a Government commission charged with the duty of making an inquiry and devising a labor system satisfactory to both coolies and planters, if possible. As the commission has not as yet completed its work, what effect it will have on the price of tea is problematical.

The exporters of Ceylon tea claim superiority for their tea, basing the claim on the fact that the various processes of manufacture to which it is submitted are performed by machinery, and that the manual treatment of the leaf is reduced to the minimum.

In 1900 it was found that rapid extension of tea planting in both Ceylon and India had so increased production as to glut the English market, where the price fell to 7d. (14 cents) per pound, in consequence of which many plantations failed to show a profit on the capital outlay for that year. It had been decided by the Ceylon planters to make an organized effort to establish a secure footing in the other tea markets of the world, shipping their product direct from Ceylon, instead of through London, as had been the custom.

FOREIGN SALES PROPAGANDA.

To this end an exploiting fund was established by voluntary contributions. A few years later the voluntary fund was replaced by a fund raised by the imposition of an export duty amounting to 9.32 cents on each 100 pounds. On January 1, 1907, this tax was reduced to 6.489 cents on each 100 pounds. The proceeds of this tax, which in 1907 amounted to \$120,692, are turned over by the customs to a committee of thirty appointed by the governor, twenty-four of whose members are nominated by the Planters' Association of Ceylon and six by the Ceylon Chamber of Commerce. By order of the British Secretary of State for the Colonies the collection of the tax is to be discontinued at the end of the current calendar year.

The committee of thirty has expended the sum intrusted to it in various advertising methods in the United States, Canada, Russia, and Germany. For the United States a commissioner was appointed to exhibit Ceylon tea at fairs, exhibitions, and bazaars, to make demonstrations of its quality and to endeavor to induce the trade generally to give preference to it over tea from other countries. The exploitation work this year is in the hands of a professional advertising writer and distributor, at whose disposal a considerable sum has been placed.

The importance to the colony of the tea industry has never been lost sight of by the Government, an evidence of whose interest in it is found in the following extract from the customs administration report just issued:

The outstanding feature in the tea trade is the excellent progress made in our dealings with Russia, that market taking (in 1907) 19,670,490 pounds, an advance of no less than 6,000,000 pounds on the figures of the previous year. At the same time, as our transshipment warehouses prove, the Russians are buying increasingly in the Calcutta market, and it behooves producers to be careful to keep their teas up to such a standard as to meet successfully what is undoubtedly very keen competition. Our hold on the Australian market has been fairly retained, but there, too, there is reason to believe, India is striving to find an additional outlet for her teas.

The customs returns show the total value of tea exports in 1907 to have been the equivalent of \$24,878,535. This figure is undoubtedly

below the actual value of the tea shipped, as while the declared exports to the United States invoiced through this consulate shows tea to the value of \$1,078,911, the customs returns show the same exports at a value of \$764,744. The difference in the figures may be accounted for by the fact that the exports were invoiced at the consulate at their actual value, while the customs estimated the value at a flat rate of 41.5 rupee cents (13.46 cents) per pound.

DESTINATION OF TOTAL EXPORTS.

The value of tea exported in 1907 was 58.7 per cent of the total of all Ceylon's exports. The increase in tea exported over 1906, by weight, was 9,316,336 pounds; the average value was increased 1.78 cents per pound over the average value estimated in 1906. Russia and the United Kingdom doubled their demand for green tea over that of the preceding year, the increase in their purchases being no less than 2,000,000 pounds. The distribution of tea exports in 1907, as shown by the customs returns, was as follows:

Country.	Pounds.	Value.	Country.	Pounds.	Value.
United Kingdom.....	111,485,802	\$15,422,208	United States.....	5,528,297	\$764,744
Australasia.....	28,789,666	3,290,904	Germany.....	578,881	80,060
Russia.....	19,670,490	2,721,085	France.....	461,845	63,889
China.....	7,699,129	1,065,046			
Canada.....	6,161,602	852,688	Total.....	179,844,827	24,878,585

The principal exports of tea during the quarter ended March 31, 1908, were:

Country.	Pounds.	Value.	Country.	Pounds.	Value.
United Kingdom.....	25,881,817	\$3,580,318	United States.....	963,125	\$133,282
Australasia.....	5,214,550	721,319	Germany.....	58,199	8,051
Russia.....	5,418,895	749,613	France.....	151,799	20,999
China.....	2,016,600	278,968			
Canada.....	1,763,138	246,667	Total.....	41,468,123	5,919,507

In explanation of the large quantities of tea shipped to China, the local trade offers the statement that it is used in blending with China teas for further forwarding.

The final destination of much of the tea shipped from Ceylon to the United Kingdom is not known here, as it is often reexported by London dealers. It is estimated that by reason of this fact the quantity of Ceylon tea consumed in the United States is between three and four times as great as the quantity shipped direct.

Japanese Home Matting Weaving.

Consul-General Henry B. Miller sends from Yokohama the following Japanese newspaper clipping relating to the largest commercial firm of the Empire entering on the manufacture of matting:

The Mitsui Bussan Kaisha, in addition to its numerous spheres of activity, has entered upon the manufacture of matting at Akashi. The company is lending about 1,000 weaving looms to families in villages near Akashi, who will make matting at their homes. The company supplies materials, and each family producing one piece of matting (40 yards) a day will receive 75 cents, gold, for the work; a producer of two pieces will receive 85 cents (each); of three, \$1; of four, \$1.25; and of five, \$1.50, while those families continuously engaged in the manufacture for six months or longer will receive a bonus in addition to wages.

SECURING MEXICAN TRADE.**ORDERS AWAIT AMERICAN HOUSES CONFORMING TO CUSTOMS.**

Consul Thomas W. Voetter, writing from Saltillo, gives the following practical trade suggestions for exporters to Mexico:

In shipping clothing and textiles to Mexico, American manufacturers should give special attention to those articles which are to sell at a low price in competition with European or Mexican made goods, this attention to be directed to the matter of so finishing the goods that they can enter Mexico under the lowest proper customs tariffs. The addition of an apparently insignificant trimming of cheap silk may make a great difference to the person who is to pay the duties.

A case which happened recently will illustrate. A merchant here ordered some shirts from a maker in the United States and specified that they should be all cotton. When they reached the custom-house at the border, the Mexican customs authorities decided that silk was used in the manufacture of the shirts, and not only placed the heavy duty for silk-mixed goods on the consignment, but assessed a heavy fine in addition for false declaration in the invoice, which had stated the goods to be only of cotton. The result of the difference of statements was that the goods remained in the custom-house for four months pending the settlement of the case. The final outcome was not told me, but the merchant stated that the shirts, which he had ordered for the purpose of selling at \$2 each, would have to be marked up to \$5 each if the higher duty and fine were to be paid. The use of silk thread in sewing the shirts, or a little fancy silk stitching, or even a label with the brand name in silk woven into it, might be enough to cause a heavy duty instead of a light one being imposed.

DELIVERY PRICES WANTED.

A merchant of Saltillo has made a suggestion which he thinks would aid American salesmen in obtaining business. When the traveler is asked what the goods will cost laid down at destination, he should be able to give the prospective customer a prompt answer without having to go through a series of calculations. He suggests that on the tickets attached to each sample the rate of duty and a price sufficient to cover freight and incidental expenses should be written, in addition to the price at point of shipment. This extra information should be placed on the ticket before the salesman starts on his trip. Such information is given by German salesmen and is of great influence in getting sales.

My informant gave it as his opinion that the large American houses in the dry-goods business could get hundreds of thousands of dollars' worth of increased business in Mexico each year if they would come after it in a practical way, by placing a capable agent in Mexico City to do business in the way the merchants of this country want to trade, with power to make such terms as his competitors do in the way of credits and payments. My informant states that American goods and prices would be satisfactory to the trade in this country, and that a little consideration for the business customs of the purchasers would insure the obtaining of a good and profitable volume of trade.

LOGGING IN COLOMBIA.

VALUABLE TIMBER RESOURCES AND USE OF THE CARTAGENA CANAL.

Consul Isaac A. Manning writes from Cartagena that a number of Americans and others have recently been examining the forests on the banks of the Magdalena River in Colombia with a view to their exploitation for export. Concerning the timber and the availability of the Cartagena canal for its transport, the consul says:

I am informed that large bodies of most excellent timber, carrying, in addition to Spanish cedar and mahogany of the finest quality, many other valuable trees of beautiful grain, have been discovered, and a great deal of the timber is of easy access to the Magdalena River. One of the main questions is the possible delivery of this timber at the seashore, as the delta proper of the Magdalena offers no facility therefor. Examination has recently been made of the "dique" by an English gentleman who has several options on a large tract of this timber, and he declares that it is possible to float or raft logs through it for at least eight months of the year.

This dique, which draws its main water supply from the Magdalena River at Calamar, is almost a hundred miles long and quite tortuous for part of its distance, and is very much overgrown with wild hyacinth; but recently the Condor, a screw steamer forced its way the full length of the dique, and demonstrated that the waterway is open. The English gentleman referred to recently came through the dique and informs me that in his opinion logs can be easily handled therein for at least half the year, and usually eight months.

At periods when the dique might be closed to navigation, logs could be loaded on the cars at Calamar or at Barranquilla, and thus taken alongside ship without delay.

To make navigation of the dique feasible for steamers the entire year would without a doubt be an expensive proposition, according to an American engineer who recently examined it with that end in view, but it would seem that to float logs through would not be difficult. If proved feasible, it will open up great bodies of valuable timber in the interior valleys of Colombia. There is said to be a fair current through the dique during the six or eight months of high water when logs would float without much attention. At the other seasons, i. e., of low water, it is believed that they could be towed through.

The dique empties into a deep gulf opening into the sea about 7 miles south of Cartagena Bay. This gulf is protected and at almost any season ships could lie near the mouth of the canal or dique to load logs.

Educational Progress in Uruguay.

The British consul in Uruguay states that 150 night schools for adults have been established in Montevideo and other parts of the Republic. A lyceum or school of secondary education has also been started in each of the 17 departmental capitals. The teaching staff consists of one director, at \$145 gold per month, and three teachers, at \$85 each. The educational work of Uruguay is under the direction of the minister of industries and public instruction at Montevideo.

BELGIAN INDUSTRIAL DEPRESSION.

STOCK VALUES SHOW SERIOUS DECLINES AND FACTORIES ARE CLOSING.

Consul H. Abert Johnson, of Liege, contributes the following review of present industrial and financial conditions in Belgium:

Prices of metals reached their maximum level since 1900 during the latter part of the first trimester of 1907, after which period a rapid decline in prices took place. Copper, for instance, after going as high as \$539, dropped to \$291. Tin was also subject to enormous fluctuations in price, from a maximum of \$973 to a minimum of \$500. These rapid and abrupt fluctuations in the prices of metals seem to have had little effect on the foreign commerce of the country, owing, it is said, to the compensatory effect of satisfactorily high prices that prevailed during the opening semester of the year.

On December 31, 1907, the total value of the transactions at Brussels in the stock market amounted for a certain period in round numbers to \$2,160,056,000. On March 31, for a like period, taking into consideration new securities on the market and those that were withdrawn, these figures were reduced to \$2,127,439,000, a shrinkage of \$31,459,000. Low prices were especially marked in the case of the stock of tramway lines, the iron and steel industries, and coal mines; it is thought at present that other industries are destined to be similarly influenced in the near future. It can hardly be said that the present industrial situation is hopelessly discouraging or that there exists any justifiable grounds for supposing that within the next few months matters are going to get decidedly worse.

The *Revue du Travail* stated recently that the number of forced closings of the various factories, already large during the preceding month, greatly increased during May and was actually three times as large as it was in the corresponding period of last year. The Flemish jute factories were seriously affected by these forced suspensions. In the cotton spinning mills operations are almost exclusively confined to executing old orders. A large proportion of the works connected with cotton weaving are also stopped.

A steadily decreasing production is noted in the flax spinning industry, while in the linen textile industry the situation is even worse. Three-fifths of the industries of West Flanders are at a standstill and it is reported that one of the leading factories of that section is only working thirty-five hours a week.

Conditions in the woolen textile industry are no better, and it is said that work is being suspended at all places. This depressing influence seems to be spreading throughout the entire Kingdom. It seems to be generally conceded that complete recovery from the effects of a severe crisis is usually slow, and it is not thought that the situation can show any material improvement before some months or possibly one year have passed.

Paper Mill to Be Established in Venezuela.

Consular Agent John Brewer, at Caracas, sends a translated copy of a contract between the Venezuelan minister of fomento and a business man of that country for the establishment of a paper mill there. The concession is for twenty-five years and the factory must be built within eighteen months. [The copy of the contract may be seen at the Bureau of Manufactures.]

NEW TECHNICAL DICTIONARY.

PROGRESS IN THE PREPARATION OF A GERMAN REFERENCE WORK.

Consul-General Richard Guenther, of Frankfort, notes that at the annual meeting of the Association of German Engineers lately held at Dresden, announcement was made that the great work of compiling and publishing the new technical dictionary, which was conducted under the auspices of the association, had to be stopped because it was found that the expenses would amount to more than four times the estimates. Mr. Guenther adds:

The great progress in science and industries had created a vast mass of new terms and matter largely in excess of what had been estimated at the beginning. This stoppage is to be greatly regretted, as the want of a new technical dictionary and encyclopedia is acutely felt by thousands of persons engaged in scientific research, in all lines of commerce and production, in literature, journalism, and in the administration of State and municipal government.

It is, however, satisfactory to note that the executive board of the Association of German Engineers has made strenuous efforts to take up and complete this valuable work, and has succeeded in obtaining therefor the aid of the Federal Government of Germany and of the Ministry of Education of the Prussian Kingdom.

Growth of Foreign Trade of Austria-Hungary.

There are few countries in the world whose exports and imports were last year so evenly balanced as were those of Austria-Hungary. According to a British consular report dealing with the foreign trade of the dual monarchy in 1907, the imports for that year amounted to \$475,457,050 and the exports to \$473,023,800, the combined total forming a record, though the advance was not so great as in the previous few years. The remarkable expansion of Austro-Hungarian trade is, however, shown by the fact that in the past nine years the total has risen by nearly \$243,000,000, or over a third. Last year, however, was the first period since 1898 that the imports have exceeded the exports. Last year the imports from the United Kingdom showed an advance of \$8,224,000, or more than 20 per cent.

The Austrian Government has appropriated \$200,000 to encourage export trade, to be given as direct subventions to Austrian firms establishing branches in China, Siam, and the African Gold Coast.

Extent of Silverware Market in Spain.

Consul-General Frank D. Hill, of Barcelona, gives the following result of a recent visit of a representative of one of the largest New England manufacturers of silverware to that Spanish commercial metropolis:

He found practically no market for these wares here and abandoned all idea of going to Madrid and Bilbao, the other two places of his itinerary, as planned. American heavy silver plate and plated ware was too expensive for the Spanish trade and the market also limited. He received an order for \$200 worth of goods, which was regarded as a large order.

COLOMBIAN GOLD MINING.

NUMBER OF QUARTZ AND PLACER CLAIMS TAKEN UP.

Consul Isaac A. Manning writes from Cartagena: Official Colombian reports show that there have been filings on 589 mines of placer and quartz in the Department of Narino and 5,950 in Antioquia, of which latter titles to 1,183 have been granted. The consul continues:

During the month of December, 1907, filings were made on 37 quartz prospects and 18 placer claims in Narino. In Antioquia 52 quartz veins and 22 placer claims were filed on from September to December. This shows that some prospecting is being done, but indicates that the work of mine discovery is not being carried on rapidly. These are very rich mineral districts, and are worthy of more general attention from miners with capital.

Great Steel Combine.

Consul-General Robert J. Wynne, of London, sends the following abstract from the Iron and Steel Trades Journal:

The International Steel Trust, composed mostly of American, German, Belgian, and Russian concerns, has now been completed, and for the present all steel will be made abroad, while the trust will be represented by agents in the United Kingdom, who will be instructed to make a strong bid for much of the home steel trade at prices below what British steel manufacturers are now asking.

This will mean that, sooner or later, home manufacturers, in order to fight the trust, will be obliged to cut prices or put up with the loss of much of the steel trade for home purposes. As matters now stand, the British steel market has not been in such a weak state for many years, while foreign steel in large quantities, and at lower prices than we can produce it ourselves, is almost daily being dumped in the United Kingdom.

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COTTON-SEED PRODUCTS.

SWEDEN.

AGRICULTURAL INDUSTRIES—CONSUMPTION OF OIL CAKES—IMPORTS FROM UNITED STATES.

Special Agent A. G. Perkins makes the following report from Stockholm, under date of July 24:

Agriculture, cattle raising, and dairy farming are among the most important industries of Sweden, affording occupation for about 55 per cent of the population, though only about 12 per cent of the total area of the country is in cultivated fields and meadows (8,790,686 acres in cultivated fields and gardens, and 3,608,905 acres in pastures). It is estimated that there were a little more than 2,500,000 head of cattle in the country at the last census (1900), besides 1,250,000 sheep and 800,000 hogs. The principal feeding stuffs are hay, bran, peas, oil cakes, and gluten feed, in the order named, though in the past season, just prior to harvesting time, a good deal of the grain was injured by bad weather, and therefore, being unmerchantable, was fed to the stock at the expense of the feeding stuffs above named.

The consumption of oil cakes is insignificant compared with the number of cattle, official statistics showing only 120,152 tons of all kinds imported during 1906. However, this is a marked increase over the preceding years, and since 1901, when the total imports were only 54,368 tons, the consumption has more than doubled.

COTTON-SEED AND OIL CAKES.

Cotton-seed cake is not so well known in this part of Sweden, and does not constitute as large a percentage of the total consumption of oil cakes as the conditions justify. Peanut cake occupies the first position on account of its supposed even running analysis, followed by rape cake, sunflower cake, linseed cake, and cotton-seed cake, in the order named. There is no particular prejudice against cotton-seed cake, though some of the dealers say the lint interferes with the digestion.

Oil cakes, up to the present time, are not sold in this market strictly on analysis, but more on reputation (the supposed nutritive value), and in this respect cotton-seed cake seems to have obtained a "black eye" because of a shipment several years ago of undecorticated or adulterated cake to this market, containing a very low percentage

of protein and fat. "Give a dog a bad name and you might as well kill him," but patience and perseverance will be rewarded, and if the crushers will see that their goods are properly represented, and orders filled according to contract grade, they will redeem the good name of cotton-seed cake. Of the total imports of all kinds of oil cakes in 1906, France furnished 41,311 tons, mostly peanut cake, Germany furnished 27,348 tons, Russia furnished 26,343 tons of sunflower and rape cake, Denmark furnished 18,715 tons, and United States 4,188 tons.

SMALL SHIPMENTS FROM UNITED STATES EXPLAINED.

In considering the above figures it should be borne in mind that a large part of the shipments from Germany and Denmark were American cotton-seed cake, either transshipped from ports in those countries or sold out of storehouses there.

The principal ports in Sweden receiving oil cakes, with the quantities imported at each during 1906, are as follows: Göteborg 20,789 tons, Malmö 15,849, Stockholm 14,972, Helsingborg 13,310, and Norrköping 10,839 tons.

One reason for the small imports from the United States may be the limited shipping facilities, comparatively few steamers coming direct from Gulf ports to Sweden, especially the eastern coast, and transshipments always means a much higher freight rate; whereas peanut and sunflower cake, from France and Russia, respectively, as well as other cakes from Germany and Denmark, are shipped direct to Swedish ports, in most cases in bulk, which puts the American cotton-seed cake at a decided disadvantage.

Another reason is that American exporters of cotton-seed cake, so far as I am able to learn, have no direct agencies in this part of Sweden, and all other cakes are sold by local agents. It is almost useless, especially in eastern and northern Sweden, to try to work this market properly through agents in other countries. There is a certain business rivalry among the merchants that materially interferes with the success of a business conducted in this way.

Gluten feed is another American product very much in demand here, and while statistics are not obtainable at this writing it seems that by far the largest part of the total imports comes from England, though the American article is considered superior and will bring a better price. English gluten feed is quoted to-day (July 24) at \$34.06 per long ton c. i. f. Stockholm.

COTTON-SEED OIL AND LINTERS.

Very little cotton-seed oil comes to Stockholm, the principal margarine factories being in the western part of Sweden, some owned or controlled by foreign (French and Norwegian) capital. Then, too, the sesame law, which requires 10 per cent of sesame oil in all margarine butter and cheese, interferes with the possible consumption of cotton-seed oil in this trade. For soap purposes the price of cotton-seed oil has been too high for the Swedish manufacturer. Corn oil, coming mostly from England, is the principal oil used by the soap factories, together with fish oil and linseed oil, a considerable quantity of which is manufactured in Sweden. However, in this trade it is largely a question of price, and whenever cotton-seed oil can be sold relatively as cheap as these other oils a market can be

found in Sweden. English corn oil is quoted to-day \$6.14 per 112 pounds c. i. f. Stockholm. The usual terms for feeding stuffs and oils are sixty or ninety days reimbursement on London or Hamburg bankers, or three days' sight draft less 1 per cent.

Linters are not known in this market, so far as can be learned, but after describing the article to one of the cotton brokers here he said he thought he could sell them if the price was right, which of course would depend on the quality.

GERMANY.

RIVALS OF COTTON-SEED PRODUCTS IN PRUSSIAN MARKET.

One of the leading Magdeburg dealers furnishes to Vice-Consul James L. A. Burrell the following facts on the oil and seed-meal trade in that German market for the year 1907:

German poppy oil has almost disappeared from the market. Poppy oil from the Levant was offered in its stead, but its sale was restricted because of the prevailing high prices. East India poppy oil, however, was sold steadily throughout the year, but on account of the poor crop the price was higher than for some time. Sesame oil also increased in price, owing to the bad crops in India and on the Mediterranean. Nevertheless much business was done, and at times the demand was greater than the supply, due, in part, to the high prices for American cotton oil.

Peanut oil increased in popularity as a fine table oil, and the outlook for business during the present year is favorable. Peanut oil was also tried for technical purposes in place of the more expensive cotton oil, but the sales were not large.

Cotton-seed meal was used less for feeding purposes in 1907 than formerly. Palm-kernel meal, rape meal, and poppy cakes held their own, while rice bran, sesame cakes, peanut and cocoa cakes were produced in larger quantities and had a larger use. Corn products were imported in large quantities and sold at high prices.

The number of cattle kept does not show a noticeable decrease, and the demand for feed stuffs will be as great as formerly, and the prices are likely to remain high.

BRITISH SOUTH AFRICA.

IMPORTATIONS OF COTTON-SEED OIL—TARIFF CHANGES.

Concerning the imports into British South Africa of American cotton-seed oil, Vice-Consul-General George L. Foster writes from Cape Town:

The annual statistics published by the customs authorities show an increase in the importations of cotton-seed oil into British South Africa from the United States from 108,885 gallons in 1906 to 118,018 gallons in 1907. At the same time the statistics show that there was a falling off of from 43,698 gallons in 1906 to 34,470 gallons in 1907 in the importations of salad oil from the United States.

As the custom-house here states that certain importations of salad oil from the United States were cotton-seed oil, it is more than likely that the rise in importations is due to more of the cotton-seed oil

imported in 1907 being declared as such and not as salad oil, as was the case before that time. The reason for any increase in importations in the early months of 1908 is, doubtless, that it is expected that the customs conference will levy a 15 per cent ad valorem duty on cotton-seed oil in barrels, the same as has heretofore been charged on cotton-seed oil in bottles or cases. Importers and shippers are, doubtless, taking advantage of the free entry of cotton-seed oil in barrels to get stock into the country before the coming into effect of a new tariff. It is also stated that it is usual for importers to order larger shipments during the first months of each year than during other months. [Since this report was written the proposed duty of 15 per cent ad valorem on cotton-seed oil "in bulk, not intended for manufacturing purposes," has been put into effect provisionally, pending ratification by the parliaments of the colonies constituting the South African Customs Union. The ratification is confidently expected. B. of M.]

The principal grades of oil imported here are said to be "winter strained" and "summer yellow." [The firms importing cotton-seed oil into Cape Town are listed at the Bureau of Manufactures.]

ROUMANIAN SUGAR INDUSTRY.

FACTORIES PRODUCE SUGAR ONLY FOR HOME CONSUMPTION.

Consul-General Norman Hutchinson, of Bucharest, submits the following report on the beet-sugar industry in Roumania, where the factories, by mutual agreement, limit the output:

Up to the year 1895 there were only two factories in Roumania for the production of beet sugar. About 1896 the Roumanian government offered certain inducements for the attraction of foreign capital, in consequence of which four new factories were built. Their production was so much in excess of what the needs of the country called for that the Government withdrew its bounty of 16 centimes (a little over 3 cents) per kilo (2.2 pounds) on refined sugar exported. The beet-sugar manufacturers then decided to limit their production, and to this end formed a combine in order to determine how much each factory should sell in the country.

The actual amount of beet sugar sold in Roumania, and on which bounty is paid, is about 65 per cent of what the working factories could produce. The system followed by the factories generally is to produce enough sugar each year to meet their contingents, any small amount left over being exported at a loss.

The sugar is manufactured in loaves of 5 and 3 kilos, cubes sold in boxes of 5, 25, and 50 kilograms, and granulated in sacks of 50 kilograms. Retail prices vary from 20 to 24 cents per kilo. Import duty is 7 cents per kilo and consumption tax 7 cents.

The number of hectares of beets for sugar under cultivation in Roumania in 1905 was 12,029; in 1906 it was 9,676, and in 1907, 6,639. The number of quintals per hectare averaged in 1905, 180; in 1906, 198, and in 1907, 164. (Quintal=220 pounds.) The total number of quintals realized for the year 1905 was 2,170,164; for 1906 it was 1,919,691, and for 1907 it was 1,091,561. The annual consumption of beet sugar in Roumania amounts to between 30,000 and 35,000 tons.

COMMERCIAL CHINA.

FOREIGN TRADE SLOWLY RECOVERING.

From the Imperial Maritime Customs Returns Vice-Consul Ernest Vollmer, of Tsingtau, furnishes the following review of Chinese trade in 1907:

The net value of the foreign trade of China in 1907 was 5 per cent greater than that of 1906, being \$537,817,000. In the total trade Hongkong had over one-third, Japan following Hongkong, the United Kingdom coming third, and the United States, including Hawaii, fourth.

In 1907 China imported American products to the value of \$29,153,000 and exported Chinese products to the United States to the value of \$21,011,000, making a total Chinese-American trade of \$50,164,000. Roughly speaking, this is three-fifths of the trade between the two countries in 1905 and nine-tenths of the trade of 1906. It is considerably larger than the trade of any other year preceding 1905 of this century. [The official returns of the United States show imports from China in 1907, based on the value of the goods in China, of \$34,424,684, and exports to China, based on values in the United States, of \$23,097,310, making an aggregate trade of \$57,521,994.—B. of M.]

YEAR OF SLOW RECOVERY.

In giving a résumé of the commercial activity in 1907, the official publication makes the following statement:

The year has been one of slow recovery from the effects of the very general scarcity of 1906, amounting to famine over large areas; of the overtrading of 1905 and 1906, and, in Manchuria, of the late war. In the import trade caution has been the leading characteristic. Speculation on the future market, the chief error of recent years, has been largely avoided.

On the whole, crop conditions throughout the Empire were satisfactory. The stocks of foreign goods accumulated in the treaty ports have been largely reduced, but commercial classes are still awaiting some sign from the vast population of the country which will give them an indication of future conditions and warrant a resumption of active business along former lines.

The customs revenues of the country fell off 8 per cent as compared with 1906, and were lower even than in 1905, having decreased to \$26,750,363. Decreases in revenue are shown in all ports north of Shanghai, with the single exception of Tsingtau, where a 9 per cent increase is noted. In the southern and Yangtze ports trade improved a little over the previous year. Thus the north of the country, in which the chief American interests center, was commercially in the least favorable state. Dalny, Antung, and Tatungkow were brought under the Chinese customs during the year, while Harbin has been opened already this season.

CARRYING TRADE.

In the carrying trade of the Empire in 1907 every European and Asiatic country and the United States were engaged. The entrances and clearances were as follows: United Kingdom, 27,495 vessels, of 33,316,618 tons; Japan, 29,296 vessels, of 15,598,697 tons; China, 33,772 steam vessels, of 11,598,197 tons, together with 5,000,000 tons

of junk trade. The next, in respective order, were Germany, France, and Norway. The United States was last, with 549 vessels, of 1,045,899 tons. This is less than half the ships of 1902, but over twice the tonnage. Of these 549 steamer movements, 115 were entrances from foreign ports, 112 clearances to foreign ports, while 161 ships both entered and cleared for other treaty ports in China.

American firms in China are reported to number 115, and American citizens 2,862.

TRADE CONDITIONS.

SALES LIMITED BY THE INCREASED COST OF FOODSTUFFS.

Reviewing the prevailing conditions in China in 1907, Consul J. C. McNally, of Nanking, writes as follows:

The showing for 1907 is somewhat limited on account of the rapid and universal increased cost of foodstuffs, which engendered conditions that had a more or less depressing influence on trade. The fertile Yangtse Valley, usually relied upon to supply the living necessities to the interior provinces, failed in its expected function on account of the continued floods, which condition caused an unusual drain on the resources of other parts of the Empire.

The price of rice continued high, and but for the large crops in Indo-China, which relieved the situation, the strain would have been serious.

Dealers and operators have been conducting business on a very small margin, content to await developments that might encourage a more profitable and conservative expansion and at the same time work off the stock on hand, which proved larger than the demands of the market called for. Official returns, however, indicate that the outlook for trade in the immediate future is encouraging.

MANCHURIAN AND YANGTSE TRAFFIC.

The trade passing through the customs at the six ports in Manchuria and Chili (Antung, Tatungkow, Dalny, Newchang, Chingwang-tao, and Tientsin) is shown by the following figures:

Description.	1905.	1906.	1907.
Net foreign imports	\$84,585,352	\$65,996,007	\$70,066,439
Net native imports	35,706,981	36,120,557	20,496,456
Exports	23,843,441	30,517,330	31,871,897
Total	144,135,724	132,633,874	122,424,792

The 9 Yangtse ports (Chinkiang, Nanking, Wuhu, Anking, Kiukiang, Hankow, Ichang, Changsha, and Chunking) show their joint trade in the following figures:

Description.	1905.	1906.	1907.
Net foreign imports	\$84,989,677	\$77,371,832	\$88,191,560
Net native imports	18,536,524	18,605,470	22,452,021
Exports	94,483,382	86,934,968	92,381,513
Total	198,009,583	182,912,290	203,025,094

The foregoing figures indicate the 1907 aggregate trade value to be greater than for any previous year.

At Chunking exports dropped to the extent of \$20,000,000. Ichang registers a gain of \$2,000,000 over 1906, while both branches of trade increased at Changsha by 40 per cent. Hankow shows a gain of \$14,400,000, and that port seems destined to show even greater results in the near future. The trade at Nanking was satisfactory in all its branches, and while Wuhu gained in imports, the loss of \$2,800,000 in exports was more than an offset. Chinkiang also suffered a decrease in exports without any gain in imports. While the rice crop was good, the controlling high prices limited the exportation from these districts.

COTTON GOODS AND KEROSENE IMPORTS.

Among the usual imports into China, the only decided depression is in cotton goods, the total imports for the last three years being as follows: In 1905, \$145,162,360; in 1906, \$122,182,276; in 1907, \$95,132,362. They formed about 40 per cent of all the imports in 1905, about 37 per cent in 1906, and 27 per cent in 1907.

The noticeable decrease is principally in the plain, cotton yarn. Plain shirtings, T cloths, drills, and jeans form a total of 9,786,025 pieces in 1907, against 20,247,223 in 1906, and 27,724,960 in 1905. This slump principally affected goods of American origin, as drills, sheetings, etc. The plain piece-goods importations were as follows during the past three years:

Description.	1905.	1906.	1907.
	<i>Pieces.</i>	<i>Pieces.</i>	<i>Pieces.</i>
British.....	13,548,025	10,785,227	8,224,961
American.....	12,566,093	8,544,165	578,647
Japanese.....	790,580	733,436	840,401
Indian.....	650,636	85,008	67,906
All other.....	179,682		
Total.....	27,724,966	20,147,831	9,711,904

While the European countries show a slight decrease under 1906, in the general importation, that of the United States was \$6,026,186, which, in view of the almost entire suspension of the piece-goods trade, is, as the official report says, surprisingly small, and points to compensating prosperity along other lines.

The importation of kerosene oil registered 161,284,355 gallons, being 32,596,665 more than in 1906. This increase was due to the importation of the American oil, which added more than 50 per cent to its previous year's figures. Of the two leading competitors, the Borneo fell off 1,011,004 gallons, while the Sumatra increased 316,259 gallons.

Henequen Exports from Yucatan.

The statistics of henequen exports from Progreso are thus treated by the Mexican Herald:

The amount of henequen which was exported through the port of Progreso, Yucatan, during the month of June amounted to 83,064 bales, with a total weight of 13,745,042 kilos.

The following is a list of the henequen which has been exported in the past five years from January 1 to June 30: In 1904 there were 307,500 bales weighing 48,849,782 kilos; in 1905 there were 279,186 bales weighing 44,761,415 kilos; in 1906 there were 255,664 bales weighing 40,972,450 kilos; in 1907 there were 285,984 bales weighing 47,908,164 kilos; and in 1908 the number of bales exported amounted to 319,289 with a weight of 52,813,447 kilos.

TRADE OF BRITISH INDIA.

LARGE INCREASE IN IMPORTS—EXPORTS NEARLY STATIONARY.

Consul-General William H. Michael, of Calcutta, furnishes the following statistics concerning the value of the imports and exports of British India by principal articles during the fiscal years ended March 31, 1906, 1907, and 1908:

Articles.	1906.	1907.	1908.
IMPORTS.			
Animals, living	\$1,647,150	\$1,551,980	\$1,469,871
Articles of food and drink, etc.	48,620,186	5,288,426	57,115,658
Metals and manufactures of hardware and cutlery, machinery and mill work, railway plant and rolling stock, copper, iron, and steel, and other metals, etc.	59,522,465	75,472,971	100,583,650
Chemicals, drugs, medicines, narcotics, and dyeing and tanning materials, etc.	9,908,971	10,392,120	11,961,816
Oils:			
Mineral	7,453,519	8,089,890	10,515,125
Other oils	695,222	1,135,961	1,672,019
Raw materials and unmanufactured articles:			
Coal, coke, precious stones and pearls unset, silk, timber, etc.	16,204,476	14,660,702	16,679,867
Cotton, manufactures of:			
Cotton yarn	11,417,995	10,743,864	12,310,816
Cotton piece goods	123,198,335	118,814,468	140,145,579
Other articles: Cotton, silk, woolen apparel, carriages and carts, glass and glassware, instruments, matches, paints and colors, papers, etc., and stationery, etc.	64,965,235	67,809,104	80,475,298
Total merchandise	343,633,554	318,879,436	432,929,699
Gold	49,143,238	61,569,272	69,115,377
Silver	20,594,391	29,100,680	40,246,496
Government stores	30,098,904	29,782,060	22,140,375
Government treasure	105,503,377	148,569,321	140,908,735
Grand total	548,973,464	582,930,759	706,340,682
EXPORTS.			
Animals, living	644,609	754,392	719,546
Articles of food and drink, etc.	141,083,874	134,121,454	148,915,413
Metals, and manufactures of:			
Manganese ore	1,438,087	2,362,760	2,863,134
Other articles	504,010	888,999	825,188
Chemicals, drugs, saltpeter, opium, tobacco, indigo, etc.	38,161,302	38,524,610	36,796,168
Oils:			
Mineral (including wax)	683,639	490,913	885,927
Vegetable and other oils	2,039,112	1,837,774	2,024,654
Raw materials and unmanufactured articles:			
Jute, cotton, hides, etc.; silk, wool, timber, wool, etc.	223,817,836	271,774,429	253,986,876
Cotton yarn	41,292,291	34,655,107	29,910,122
Cotton piece goods	6,219,573	5,512,202	5,458,253
Cotton, other manufactures	573,137	886,498	520,291
Jute	41,483,281	52,387,434	60,992,145
Silk, wool, apparel, color, hides, skins, lac, etc.	29,346,709	33,236,606	34,112,649
Total Indian merchandise exported	527,297,410	576,940,073	577,967,319
Foreign merchandise (reexports)	11,762,700	11,613,463	12,564,043
Total exports of merchandise	539,060,110	588,553,536	590,531,362
Gold	17,636,610	12,254,474	11,283,041
Silver	3,862,579	6,785,550	6,871,051
Government stores	391,961	359,701	424,040
Government treasure	30,067,495	17,483	7,573
Grand total	591,018,755	607,970,744	609,097,067

MISCELLANEOUS IMPORTS.

Of the miscellaneous imports, not specified in the foregoing table, information concerning the following articles are available, which should, it is thought, be of interest to the American trade:

The number of clocks and watches imported into India in 1908 was 591,140, the average price being about \$1.35. This class of imports varies.

The value of the imports of musical instruments during 1906 was \$452,800; in 1907, \$476,025, and in 1908, \$1,436,635, thus more than trebling within a year. An examination of import lists shows that the large increase is due to the popularity of various kinds of talking machines, the bulk and best coming from the United States.

During 1906 the total number of motor vehicles imported into India was 698, valued at \$328,000, and in 1907 the number imported was 748, valued at \$456,276. Burma imported 85 motor vehicles. Four-fifths of the motors were received by Bengal and Bombay, and the major portion were of British manufacture.

The value of patent medicines imported into India in 1907 was \$648,835, and of drugs and medicines, \$3,060,695.

India imported in 1908 3,456 typewriting machines of various makes against 3,510 in 1907 and 2,478 in 1905. The average price of the machines was \$68. The standard machines retail here at about the same as in the United States, with freight, cartage, and duty added—that is to say, for about \$109.

The imports of finished umbrellas are falling off year by year as the manufacture of this tropical necessity increases in India. The Indian manufacturers, however, depend largely on imported fittings, and these have increased. The number of umbrellas imported in 1905 was 2,095,592 and in 1907 1,881,322, a decrease of 214,270, while the increase in value rose from \$284,525 to \$847,880. The umbrellas fitted together and partly made here are inferior in finish and shape to the American-made article. The fittings and suggestions of style come mostly from England and Germany.

Glass bangles for the wrist and ankles were imported in 1907 to the value of \$1,766,660; common bottles to the weight of 3,112 tons and 13,000,000 superficial feet of sheet and plate glass were imported during the same year. A local trade paper calls attention to American glass-making machinery, simple in its design and economic in its working, and suggests the manufacture of these glass goods in India.

MISCELLANEOUS EXPORTS.

The following details of some of the leading exports of British India may be of interest to American importers:

The exports of opium from Bombay from January 1 to June 15, 1908, amounted to 8,677½ chests, leaving available for export 6,422½ chests. Most of the opium exports went to China.

The tea shipments from April 1, 1908, to May 15, 1908, were as follows: From Calcutta, 1,081,425 pounds, and from Chittagong, 860,344; from all other ports, 1,341,510 pounds; total shipments, 3,283,279 pounds, a decrease of over 1,000,000 from the exports during the same period in 1907.

The exports of jute and jute rejections and cuttings from Calcutta and Chittagong during the eleven months ended April 30, 1908, amounted to 4,140,939 bales, against 4,463,740 during the same months in 1907. The destination of the jute exports in 1908 were as follows, in bales: United States, 293,173; United Kingdom, 1,550,117; Continent of Europe, 1,916,592; total, 3,759,882 bales. Rejections and cuttings: United States, 300,170; Europe, 67,420; all other countries, 13,467; total rejections and cuttings, 381,057 bales. The jute market

in Calcutta is unsatisfactory, and the hope of a better condition of things depends on the American demand.

The shipments of hessians (burlaps) show a decline in the first four months of 1908 amounting to 47,000,000 yards. For April alone the shipments amounted to 32,000,000 yards against 65,000,000 yards for the same month in 1907. There is a strong feeling that when the United States begins to buy prices will advance.

KITCHEN ICE-MAKING MACHINES.

EXTENT OF REPRESENTATION ON THE MARKETS OF FRANCE.

An American correspondent transmits to Consul-General Robert P. Skinner, of Marseille, an American newspaper clipping, in which it is stated that the problem of producing ice in small quantities quickly and cheaply has been solved by a French inventor, and who asks him to furnish the name of a French firm manufacturing this new machine. To this the consul-general responds:

I find upon inquiry that devices such as are described in the newspaper article have been upon the market in this country for a dozen years, but apparently they never have advanced much beyond the interesting scientific toy stage. In the chief bazaar of Marseille one model remained on hand the price of which was 75 cents, and the salesman informed me that it had been imported from the United States. In this device, similar in form to a domestic ice-cream freezer, the water is placed in a tin receptacle, which is plunged into nitrate of ammonia. After agitation, ice is formed and withdrawn from the tin.

Better machines of French manufacture were upon the market for a long time, and sold for from \$6 to \$10. The manufacturers claimed that the nitrate of ammonia could be used over and over again, but in practice this appears not to have been the case. So much dissatisfaction followed the sale of these devices that most of the local dealers soon ceased to handle them.

At the present time one reliable Marseille house is selling with satisfactory results another form of freezing machine, worth from \$17.37 to \$27.02, according to size. No. 0 gives 300 grams (10.58 ounces) of ice per thirteen minutes; No. 1, 600 grams (21.16 ounces) in fifteen minutes; No. 2, 1,200 grams (42.32 ounces) in fifteen minutes, and No. 3, 2,400 grams (84.64 ounces) in twenty minutes. This device consists of a porcelain recipient for the water, which is placed inside a larger recipient containing either nitrate of ammonia or sulphuric acid and sulphate of soda. The whole, when tightly closed, is fitted to a curved iron frame, which once set in motion by the hand continues rocking automatically a sufficient time for the production of the ice.

The manufacture of artificial ice in most French cities is now carried on upon such a scale that it is scarcely profitable to make use of domestic ice-making machines, which nevertheless appear to have a considerable utility in hot countries where modern ice manufacturing and distributing methods do not exist.

FOREIGN TOBACCO TRADE.

GERMANY.

BREMEN A GREAT TOBACCO IMPORTING AND EXPORT PORT.

Consul William T. Fee furnishes the following information concerning the trade in tobacco conducted through the German port of Bremen:

The two chief importing and distributing places for tobacco in Germany are Bremen and Hamburg. Over the quays of these two ports, besides the supply needed for Germany, pass large quantities of tobacco, either as "declared transit goods" or as German imports, which are later on sold and forwarded to the monopolies and factories in countries foreign to Germany.

The declarations of weights and values of imports and exports from which the statistics are prepared are compulsory, and thus the weights given are absolutely correct, excepting natural loss or gain of weight during storage and transportation. The declarations of values of imports and exports have different bases, the importer or first owner declaring his purchase price, while the exporter, who often is the second or third owner, has to name his selling price in making his customs declaration, thus including profit or loss, according to the fluctuations of the market, interests, and other costs. Hence the statistics of the values declared at the German customs house are of no interest in making comparisons between imports and exports and are therefore not quoted in this report.

Java and Sumatra tobaccos are always imported from Dutch ports (Amsterdam and Rotterdam) and not directly from the country of production. Large quantities of the two kinds are bought and sold at those ports by Bremen merchants, and these quantities, of course, are not included in the following statistics (a metric ton being 2,204.6 pounds):

IMPORTS AND REEXPORTS.

The following statement shows the imports of tobacco into Bremen from the several countries in 1905, 1906, and 1907:

Whence imported.	1905.	1906.	1907.	Whence imported.	1905.	1906.	1907.
	<i>Metric tons.</i>	<i>Metric tons.</i>	<i>Metric tons.</i>		<i>Metric tons.</i>	<i>Metric tons.</i>	<i>Metric tons.</i>
United States:				China	171	168	364
Kentucky	8,580	9,807	10,484	Cuba	1,899	930	852
Maryland	765	371	461	Santo Domingo	4,106	6,098	5,719
Ohio	169	124	92	Porto Rico	38	33	818
Seedleaf	1,110	493	808	Brazil	14,892	15,492	19,146
Stems	2,167	4,004	1,453	Paraguay	1,535	733	727
Virginia	2,538	1,937	2,310	Mexico	769	380	485
Total	15,329	16,736	15,608	Colombia	1,985	2,660	6,088
Dutch India:				Turkey	665	1,077	1,169
Java	5,804	8,417	10,278	Total	50,138	55,923	65,176
Sumatra	2,819	2,949	3,144				
British India, Borneo, Manila, etc	136	250	778				

The reexports to the several foreign countries are only given for 1907, and were as follows: American, 8,204 metric tons, of which Kentucky figures for 6,022 tons; stems, 1,073 tons; Virginia, 485 tons; seedleaf, 302 tons; Maryland, 280 tons; and Ohio, 42 tons. The re-

exports of Kentucky were to the following countries: Switzerland, 2,397 tons; Sweden, 1,364 tons; Denmark, 1,158 tons; Norway, 220 tons; West Africa, 297 tons; Argentina, 134 tons, etc. American stems went chiefly to European Russia and Sweden. The reexports to foreign countries of tobacco, other than that from the United States, was as follows in 1907, in metric tons: Javan and Sumatran, 1,442; British Indian, etc., 40; Chinese, 44; Cuban, 323; Santo Dominican, 1,651; Porto Rican, 56; Brazilian, 8,686; Paraguayan, 472; Mexican, 167; Colombian, 544; Turkish, 567; making a total reexport to foreign countries of 22,196 metric tons, leaving 44,980 metric tons for storage in Bremen and for consumption in Germany, in 1907.

MISCELLANEOUS.

At Bremen as well as at Hamburg there are what are called "free harbors," with large commodious warehouses, where any import from over the sea may be landed and stored for any length of time at low charges. Government duty is not payable until goods are withdrawn for consumption or to be transported into the country, and in case of reexportation no duty at all is levied.

In respect to American tobaccos, and more especially in regard to such goods as are suitable for cigar manufacturing, it is claimed that prices paid by American manufacturers and dealers for the higher grades of the home-grown product are so far above the limit that German manufacturers could not invest and that, in fact, the largest part of seedleaf tobacco was sold in the United States under contract long before it was harvested. Whatever reached this market during the past year was readily sold at high prices. Consequently the consumption of Brazilian, Javan, and Santo Dominican, for fillers and binders, and Sumatran tobacco, for wrappers, is steadily increasing.

The imports of tobacco at Bremen in 1907 were the largest from Brazil, followed by those from Kentucky, with Java third. It is a high compliment to the Bremen merchant that he can import tobacco from Brazil and reexport it at a profit, as he did last year, back across the Atlantic to Argentina and Uruguay—777 and 134 tons, respectively.

IRELAND.

GOVERNMENT ENCOURAGEMENT OF TOBACCO CULTIVATION.

Reporting upon the government grant of \$30,000 per annum for five years for the encouragement of tobacco cultivation in Ireland Consul-General Robert J. Wynne, of London, writes as follows:

The cultivation of tobacco in Ireland was strictly forbidden until recently, when a rebate of 1 shilling (24½ cents) per pound was granted to encourage a revival of the industry. It is claimed that the climate of Ireland is suited to tobacco culture, that the experimental stages have been successfully mastered, and it is believed that by the year 1913, with the help of the government grant, Ireland will have a flourishing tobacco industry in the agricultural provinces of Leinster and Munster.

BELGIAN WOOLEN INDUSTRY.**SERIOUS DEPRESSION AT THE LARGE VERVIERS FACTORIES.**

Consul H. Abert Johnson, of Liege, under date of July 17, contributes the following review of conditions in the Belgian woolen industry:

The three months just passed have proved decidedly unfavorable to the carded-thread branch of the woolen industry. The decline in prices of wool stopped abruptly, and the feeling of unrest previously experienced has been followed by an unusual firmness. Many clients of the woolen mills at Verviers, wishing to take advantage of the low prices prevailing, hurried their orders, and this resulted in giving a certain amount of animation to the market, but, unfortunately, only of an ephemeral character.

Since the beginning of June a period of almost complete calm has held sway, and the trimester closed with conditions decidedly more discouraging than they were at the end of the previous three months. It seems impossible that the buyers of carded thread can abstain from sending in their orders for a much longer period. Transactions have been practically at a standstill since October. The situation generally is so decidedly unsatisfactory that anything like a speedy prosperous revival can hardly be expected. A slight improvement in present conditions is all that can be hoped for.

TEXTILES AND WOOL WASHING AND CARBONIZING.

Conditions in the textile branch of the woolen industry seem to be in a worse state. There was an immense falling off in winter orders during the first trimester, while the orders for summer goods during the second trimester fell far below the normal level maintained during previous years, the decline in the price of the raw material having had a tendency to render buyers rather cautious about giving large orders. Sales for export have continued calm, as most of the countries from which Verviers' clientele is recruited are suffering themselves from the effects of the industrial crisis.

Japan, one of the most important buying countries for the Verviers mills, is also suffering from financial depression, and orders from that part of the world are at their lowest ebb. On the other hand, the unstable prices for raw material and the uncertainty that reigned in the woolen market have tended not a little to aggravate the situation. The semester just finished has been one of the worst ever passed. Rarely before has Verviers displayed such a measure of inactivity in her industries or been subjected to such long periods of forced closing of many of her leading industrial establishments. Such a discouraging situation of affairs is not, however, confined to this particular locality, and some consolation may possibly be derived from a recognition of the fact that Verviers' competitors in other countries are obliged to face equally unsatisfactory conditions.

Contrary to what had been generally predicted, the termination of the second trimester found the situation in wool washing and carbonizing slightly better. Orders, although not attaining anything like the importance of previous years at the same period, were about normal. The expense of warehousing, insuring, and the care of wool

are at present altogether abnormal and absorb a large proportion of the profits on the low prices now prevailing. The future looks uncertain and discouraging, and it appears as though the number of forced closings were destined to increase.

FOREIGN RAILWAY EQUIPMENT.

FURTHER SALES BY AMERICAN FIRMS TO THE JAPANESE GOVERNMENT.

Consul George H. Scidmore, of Nagasaki, is informed by statements appearing in the local Japanese press that immediately after the Kiushiu Railway became national property on July 1, 1907, the Government Railway Bureau placed orders in the United States for 24 locomotives and 30 passenger cars, to be employed in that district. The consul adds:

The locomotives and five cars have already arrived in Japan. The cars are being fitted in the Imperial workshops at Tokyo. It is stated that they are much superior to any now running in Japan. One is a first-class carriage to seat 38 persons, and valued at 28,000 yen (\$13,944); another is a second-class, seats 50 persons, and cost 26,000 yen (\$12,948); the others are a dining car which seats 27 persons and cost 45,000 yen (\$22,410); a sleeping car which accommodates 18 persons and cost 52,000 yen (\$25,896), and a special car with sitting and dining rooms and berths for six persons, and cost 54,000 yen (\$26,892). The locomotives heretofore in use on this line were also of American make.

New Line Between Borneo and the Philippines.

Consul Lester Maynard sends the information that on May 25 the steamship *Germania* called at Sandakan, British North Borneo, on her first trip of a regular monthly run between Zamboanga and Sandakan, calling at Jolo, Bongao, Sitanki, and Cagayan Sulu, in the Philippines. The *Germania* was formerly the transport *Sacramento*, and has recently been purchased and refitted with new boilers and engines by a company subsidized by the Moro government, being guaranteed a gross revenue of 5,500 pesos (\$2,750 United States currency) per month. In addition to the monthly run to Sandakan, the *Germania* will devote two weeks each month to an interisland trip between various ports of the Moro Province.

Russian Black Silver Jewelry.

Consul W. W. Masterson, of Batum, states that there are no manufacturers of jewelry, as the term is understood in the United States, engaged in the manufacture of novelties in jewelry in that part of Russia, but that there is made by hand in Batum in little shops novel and beautiful silverware called "Georgian work." It is an inlay of almost black silver in fancy designs on the white silver background, and the work is used in spoons, cups and mugs, belts and buckles, tea sets, and in fact in everything in which ordinary silver is used. The makers of the ware profess to keep the process of making this dark silver inlay as a trade secret.

FOREIGN TRADE OPPORTUNITIES.

[Inquiries in which addresses are omitted are on file at Bureau of Manufactures. In applying for addresses refer to file number.]

Consuls are requested to contribute to this department.

- No. 2541. Chairs.**—An American consular officer in the West Indies reports that an American firm there desires to represent manufacturers of low-priced chairs and rockers.
- No. 2542. Lubricating oils.**—A business man in Europe has written to an American consular officer there that he is in the market for a quantity of lubricating oils and requests that independent American firms communicate with him.
- No. 2543. Machines for shelling ivory nuts.**—Catalogues and quotations on machinery and wearing parts for shelling ivory nuts are desired by a man in Latin America. He has stated to the consular officer there that the machines must have a capacity of shelling two tons of ivory nuts every twelve hours of operation. He also desires quotations on a boiler and engine of sufficient horsepower to drive these machines. A specimen ivory nut is filed with the Bureau of Manufactures and will be loaned to those who desire to submit quotations on this equipment, and who are unfamiliar with this product.
- No. 2544. Galalith.**—An inquiry has been received by the Bureau of Manufactures for the names of American producers of galalith, a material similar to celluloid, and made from skimmed milk.
- No. 2545. Pine fiber.**—An American consular officer in Europe reports that a business firm there wishes to be put in communication with American firms desiring to export pine fiber.
- No. 2546. Three-ply wood.**—A firm in the British Isles has written to an American consular officer there requesting the names and addresses of American firms manufacturing three-ply wood.
- No. 2547. Souvenir button machines.**—A letter has been received by the Bureau of Manufactures in which the names of makers of hand machines for making souvenir buttons are asked for.
- No. 2548. American breeding cattle and horses.**—An American consular officer reports that a business man has written to him that it is his intention to import American breeding cattle and horses into one of the Latin American countries, and he desires that breeders communicate with him.
- No. 2549. Leather.**—Quotations and samples of black glacé and colored glacé leather are requested of an American consular officer by an European firm. The qualities desired are from 12 to 20 cents per square foot for the black glacé and from 20 cents upward for the colored glacé.
- No. 2550. Flour.**—A letter has been received by this Bureau from a merchant in one of the Mediterranean countries, in which he states that he desires to make connections with American flour mills for the sale of their products in that country. He further states that upon receipt of samples of wheat flour and Indian corn meal, with the respective prices, he will communicate all the necessary details regarding packing, forwarding, etc.
- No. 2551. American goods.**—An American consul in one of the Scandinavian countries reports that a business firm there desires to communicate with American manufacturers and exporters of cotton yarn, woolen yarn specialties, so-called "combed yarn," raw cotton, flour, meats, petroleum, packed and canned fruits, chemical specialties, chandlery, ironware, hardware, and cheap pencils.
- No. 2552. Catalogues of American goods.**—An American diplomatic officer has written to this Bureau that a wholesale business house in one of the oriental countries desires to receive from representative American manufacturers and merchants their catalogues covering the following lines: Furniture, brass and iron beds, rugs, carpets, tapestries, lamps and light fixtures (electric, etc.), trunks and traveling bags, saddlery, carriages, motors, motor boats, motor cars, toilet articles, jewelry, art supplies, picture frames and moldings, tableware of china and porcelain, glassware, electroplated ware, silver-plated ware, cutlery, hardware, footwear, stationery, etc.

ADVERTISING IN MEXICO.

CATALOGUES AND TRADE JOURNALS SHOULD BE PRINTED IN SPANISH.

Consul William W. Canada, writing from Veracruz, tells why advertising and all other attempts to enter into business relations with Mexicans should be in the Spanish language. He says:

In view of the fact that the publication of trade journals, catalogues, circulars, business registers of manufacturers, and so much other advertising matter is virtually flooding this country, attention should again be called to the necessity of printing such literature in the Spanish language. It may be mentioned that no matter how well a Mexican business man may understand English, he rarely enters into a transaction that may involve him in loss unless the proposition is made in his own tongue. The law obliges him to keep his books in Spanish; no document written in a foreign language is admitted in court unless accompanied by a translation which has been certified to as correct; and no matter how well a public official may understand English he will transact business only in Spanish.

It having been suggested that casinos, clubs, chambers of commerce, boards of trade and societies, places where business men congregate, would be the proper places for the display of advertising matter, a careful canvass of this consular jurisdiction has been made with the object of furnishing the names of all such organizations, so that merchants, manufacturers, editors, and commission merchants may address their publications direct to these societies.

[The list of addresses may be had by applying to the Bureau of Manufactures.]

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Washington, D. C.

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FLOUR MILLING INDUSTRY.

THE UNITED KINGDOM.

IRELAND'S FLOUR TRADE—POPULAR TASTES AND DEMANDS—SUPPLIES FROM AMERICAN MILLS.

The character of the flour trade of Ireland and qualities required to meet popular demand is described by Special Agent M. H. Davis in the following report, dated Dublin, July 24:

The flour trade of Ireland presents an aspect materially different from that of the remainder of the United Kingdom. Whereas England, Scotland, and Wales require the products of hard wheats in preference to those of soft or winter wheats in the ratio of two-thirds to one-third, the situation in Ireland is exactly reversed in respect to the flours consumed. Soft wheat flours have always had the preference in Ireland. A few years ago full three-fourths of the flour sold in Ireland was made from soft wheats. To-day soft wheat flour represents about two-thirds of the consumption. There is no doubt but that hard wheat is slowly gaining in favor, this being brought about by the growing influence of the large bakeries at the more important centers of population. These are increasing year by year in size and number. Some of them use hard and soft flours in about equal portions, while the majority mix in a larger percentage of hard wheat flour. Home baking in Ireland, still the larger factor in consumption, is exclusively in soft wheat product. The inroads made as against home-baked bread by the baking companies have been very marked in recent years, but it will be many years before anything like a general substitution of bake-shop bread will come to pass in the rural districts. It may, therefore, be concluded that for a long period in the future, winter or soft wheat flour will constitute the favorite breadstuff with the majority of Irish consumers. The change noted has taken place in the cities and territory adjacent thereto.

Ireland's population is somewhere about 4,000,000, or possibly 4,500,000. Authorities seem to differ in the absence of any recent enumeration, and the tendency seems to be toward a decrease in numbers from year to year. Notwithstanding the lack of prosperity and absolute poverty in many sections of Ireland, only the very best bread obtainable is wanted for food. Second grades of flour, or inferior makes of bread, can not be sold. This peculiarity applies as

to other food products in Ireland as well as to bread. The best seems none too good, no matter what the surrounding conditions may be as to wealth or poverty.

SUPPLIES FROM AMERICAN MILLS.

For many years American mills supplied by far the greater part of Ireland's requirement of flour. It is doubtful if over half is now American product. This seems to be the consensus of opinion among the importers, while the Irish and English mills are seemingly determined to drive out the American product, regardless of the cost of so doing. It looks as though the progress the latter have made is not permanent. The gain in the Irish trade of British mills has been made under conditions that have happened to specially favor them. It has been maintained at the expense of profits at a time when wheat supplies were more nicely adjusted to the benefit of British mills than they ever were before, or are likely to be again for any continued period of time. British mills have undoubtedly lost money heavily in the Irish trade the past twelve months. Expensive sales methods, cut prices, and secret rebates have been indulged in to such an extent as to be disheartening, if very good evidence on this score can be relied upon in the shape of expressions of millers themselves. The game has not been worth the cost, for the real competition is between the British mills themselves and not as against American mill prices. Of course, American flour has suffered in that trade and has not increased as it otherwise might have done, but on the whole more flour from America has probably found its way into Ireland in 1907 than in 1906, and the prospects for 1908 are certainly promising at this writing.

CONSUMPTION AND DISTRIBUTION AT BELFAST.

The city of Belfast has a population of 400,000, largely engaged in manufacturing pursuits and shipbuilding. It is doubtless the most prosperous community in Ireland, and being a first-class port, with splendid dock facilities and railroad connections, is in a position to supply the needs of many more than its own inhabitants. It is thought that full 1,500,000 people, constituting the northern one-third of Ireland, obtain their flour requirements through the medium of the flour importers and millers, directly or indirectly, of the port of Belfast. Of the importations of flour, the Belfast importers handle two-thirds, while importing houses of Glasgow, Liverpool, and some other ports handle the remaining one-third.

A few years ago home baking took two-thirds of the flour used in Belfast and immediate vicinity. Now more than four-fifths of the bread used is provided by the large baking companies. Of these there are close to 15 that may be termed large producers of bread. One of them bakes from 1,250 to 1,500 sacks of flour of 280 pounds each per week, and a second shop is nearly as great in capacity and output. The advent of the drawplate oven and improved machinery generally have worked a revolution in the kind of bread used in the city and large town districts. Belfast bread carts may now be seen daily in the lanes and byways throughout the greater part of the north of Ireland. The large bakeries, already in possession of the city and large town trade, are extending to and securing a foothold in the small towns and hamlets. As the country baker dies off there

is none to take his place, and his remaining customers find their wants are readily supplied with the excellent product of the city shops. It is only the rural community, remote from the towns but constituting full one-half the population, that adheres to home-baked bread.

KIND OF BREAD REQUIRED.

In Ireland this particular style of bread is in a class by itself. It is baked without yeast, and its preparation is a matter of only a few minutes. Soft-wheat flours only can be used. The needed leavening is furnished by a mixture of ordinary baking soda with sour milk, to which the flour is quickly added and the loaf formed by hand. This is then put into a covered kettle and placed over a hot fire of peat with the burning fuel kept piled up around it until the baking is complete. The result is a light, sweet loaf, very palatable and nutritious. If the flour is too strong the moisture is too quickly absorbed, and the bread is too dry and apt to crumble. If too weak and soft the bread is soggy. As the home baking is mostly done "by rule of thumb," it follows that once familiar and suited with a flour, the housewife may not meet with good success with flour needing different treatment from that to which she is accustomed. Thus a really good flour may be rejected as worthless simply because it was not understood. Hence the difficulty flour dealers meet with in the introduction of flours whose characteristics are different from those to which the people are wedded by habit. Winter-wheat flour suited the people years ago and it suits them to-day. Moreover, their habits have not changed, nor has their education increased sufficiently to justify any effort to change their habits if such were desirable. As long as the rural class makes its own bread it will require winter or soft-wheat flour.

HOW AMERICAN FLOUR WAS DISPLACED.

It happened in 1904 that the winter wheat crop in the United States was deficient. The flour was not like it had been in previous years, and the Irish farmer's wife could not, or did not, get the bread results she was accustomed to. The American spring wheat crop that year was also off in quality, and the large bakeries turned to other makes of hard-wheat flours. While the Belfast importers and those of other ports in Ireland were thus disturbed in their American trade relations, the same condition prevailed throughout the United Kingdom wherever American flour was used, though perhaps not to the extent manifest in Ireland. Thus a most favorable opportunity was given to the Irish, English, and Scotch flour millers to displace the American product. New and enlarged mills in Ireland pushed their goods into Irish stores and bakeries that had scarcely known them before, and English mills were enlarged and built up to secure the suddenly developed domestic trade. The millers seeking trade in Ireland were fortunate in securing just the right wheat and imparting the needed characteristics to their flour to meet the peculiar demand of the Irish rural trade. These mills used the white or blue stem wheats of the United States Pacific coast, or the white Australian or Indian wheats. Such varieties happened at that time to be in plentiful supply, and have so continued up to a recent date. These white wheats yield a flour which in its natural condition produces a yellow

dough far less satisfactory than the white flour from American No. 2 red wheat. It must be borne in mind that the Irish buyer does not buy flour by sample. He cares nothing for samples. He demands of the miller or importer a flour that will suit his trade, and he is not easily influenced to place additional orders if the goods have at any time failed to please. The farmer's wife must have none but that which will make the largest loaf and whitest bread. So the Irish and English millers, seeking this trade when American millers were having trouble with an inferior crop of wheat, resorted to the practice of bleaching the yellow flour made from the white wheats of the Pacific and Australia. They used chemicals and electricity to produce the gas that would bleach to a dead white the yellow flour they made. The wheat they used was otherwise of a kind to suit the case, and the matter of color overcome, they soon had a foothold where before they had done little business.

THE BLEACHING PROCESS.

It may be remarked that necessity in this, as in other cases, was at the bottom of the bleaching of flour, and the process came into being because it was the one thing needful, and in Belfast the only practicable bleaching method to be applied to flour was first introduced and used and patented. This much is claimed by the largest milling concern in Belfast, whose name ("Andrews Process"), the basic patent, so claimed, now bears. Following the lead of the Andrews mill in flour bleaching, other British mills adopted the process. Thus, with the white wheats at their command and the bleached flour fairly satisfactory, by cutting prices until they have no profit left, the Irish and English mills are now so well established in the Irish rural trade, and to some extent in the city baking trade, that American mills must face a serious problem in regaining what trade has been lost. Notwithstanding the claims of British mills as to their opportunity of selection of wheats from all parts of the world, the cause is weakened when, for any reason, there is a scarcity of any needed standard variety. A failure to secure white wheat at low prices will lose the Irish rural trade to British mills. It is this knowledge that keeps the Irish importers of American flour faithful and hopeful.

IMPORTS AND HOME PRODUCTION.

Of Belfast's imports of foreign flour, about 95 per cent comes from the United States. So far as the north of Ireland is concerned, the flours of Germany and France need not be regarded as factors in the supply. The competition, though actually between the Irish mills and the English mills, is carried on with such intensity as to tend toward displacing foreign flour of every make. The Irish Industrial Development Association, which claims to keep a watchful eye on Irish industrial affairs, is very active in keeping alive a sentiment favoring Irish products of every kind, almost proceeding to coercion or boycotting, in extreme cases, to carry its ends. Things English as well as things American come under the ban of this association, but if any favor is shown a foreign product, American flour is likely to fare better than the English product.

There are four modern mills in Belfast, with an aggregate capacity of 2,400 barrels per day, and three other mills in the north of Ireland, one each at Ballymena, Newry, and Londonderry, with a combined

capacity of 800 barrels daily. These mills operate, it is generally believed, to about 75 per cent of their capacity, the largest mills operating nearly full time the past few years.

CONDITIONS AT DUBLIN.

Whatever has been said above in general terms as to the Irish trade regarding the north of Ireland and Belfast, applies equally well as to Dublin and the south two-thirds of the island. The people of the two sections differ in religion and in degrees of prosperity, but their household habits as to breadstuffs are identical. The same kind of flour suits both sections. Methods of distribution are much the same. The population of Dublin is less than Belfast, being placed at 350,000, but Dublin being more centrally located, and being the seat of government, may be said to have some natural advantages as a distributing point. Her importers, like those of Belfast, are reaching out over the entire island, but find competition of the English and local mills very severe at all coast points, and in the south of Ireland particularly. There is really only one importing house located in Dublin distinctively claiming that city as its home, but many other importing houses of Belfast, Liverpool, Glasgow, and London have branches or agencies in Dublin from which their traveling men for Ireland are handled. While much of Belfast's receipts of American flour reach that city by direct steamer, more of Dublin's imports go by way of Liverpool, though direct sailings are made from America to Dublin. The route via Liverpool is chosen so that large consignments may be broken up at that port, and distributed to various south and west of Ireland ports in smaller quantities. Thus the requirements of parcels of flour, whether designed for Dublin, Cork, Limerick, Waterford, Sligo, Tralee, and many other small cities, can be conveniently handled via Liverpool for transshipment by coastwise steamers. The buying may be credited to Dublin and the original shipment to Liverpool, neither of which cities may be a factor in the actual consumption.

CONSUMPTION OF AMERICAN FLOUR.

Full 80 per cent of all the flour actually consumed in the city of Dublin is made in the United States. Canada may supply 5 per cent and the local mills the balance. Not much English-made flour is used in Dublin. In the outlying districts and throughout the south, central, and west of Ireland the local and English mills have two-thirds or more of the trade. There are many small mills scattered through the southern half of Ireland, the wheat raised in that section being fairly good for milling purposes. However, but little can be said in favor of Irish wheat. The climate is not calculated for any increased production of wheat or cereal crops. Only that part of Ireland constituting the south half can mature wheat so that flour can be made from it. The wheat grown in the north half is soft and spongy and fit for feed purposes only. Thus the more pretentious mills at Dublin, Limerick, and other central and southern points must use foreign-grown wheat, and the white wheats of the United States Pacific States, and that of India and Australia are largely drawn upon.

The quantity of American flour imported is about equally hard wheat and soft winter wheat flour for the Dublin trade proper. In the country trade it is practically all soft winter. These shipments

come in both cotton and jute sacks of sizes from 98 pounds to 140 pounds and 280 pounds. For the country trade the 98-pound cotton sack is preferred. In this style package the United States Pacific coast mills in previous years have shipped to Dublin considerable quantities, but I can learn of but two or three cargoes, of possibly 50,000 bags each, reaching Dublin from the Pacific coast the past season. This is a white wheat "patent" bleached, and goes into the country retail trade.

There are six milling concerns in Dublin, the largest making about 15 sacks per hour, say 500 barrels per day. The other five will average in daily output each about half this quantity. Two of the largest Dublin mills have bakeries in connection with their milling business, using considerable of their own product, but using also very respectable quantities of American flour, mostly of hard wheats for blending. One of these bakes as much as 1,700 barrels of flour per week.

WHITE WHEAT BRAN.

An advantage the British and Irish millers have is in the high prices the Irish farmers are willing to pay for white wheat bran as compared with that from red wheat. This has led to special preparation by steaming and rolling finished bran so it will be exceedingly flaky and broad. No such bran is seen in the United States. Bleaching of bran is also resorted to to make it pleasing to the Irish feeder. The broad, white bran will at any time command a price equal to \$10 a ton more than the ordinary red-wheat bran. This fancy white bran is shipped in second-hand 280-pound flour sacks, or packages similar in size, containing about 140 pounds of bran loosely packed and sewed. The "Pollard" is what American millers would call finished middlings, except that most of the low-grade flour is disposed of by mixing it with this feed, which is consequently very rich. Much flour, too, is left on the bran. If American mills would specialize on feeds and make just what the Irish trade requires, they would have the means for depriving the British miller of the strongest weapon he has in making prices, i. e., his high value in feed. It would seem that \$35 per ton, which has been the current price in Ireland, would justify experiments by our mills. But the bran must be bleached till it is white and steamed and rolled until very broad.

IRISH TRADE NOTES.

Cardiff and Liverpool mills employ or own small coasting steamers to transport their flour and mill feed to Irish ports, having agencies for distribution to the interior villages. They thus cover an extensive territory, carrying their customers on open account, but obtaining higher prices for both flour and feed by several shillings than American flour in round lots. They have made little impression in Dublin, but at country points and in the smaller milling centers they have forced issues with the local mills, to the great discomfort of the latter.

I am informed that the use of "blind" brands is very common in Ireland, and that a reliable dealer buying of British mills can have the words "winter wheat," or almost any device he may require, placed upon his sacks of flour. Some sort of cooperation with the Irish Industrial Development Association, which is very jealous of Irish interests, might result in the enforcement of the "Merchandise Marks Act" which forbids false branding.

Cork, a city of 100,000 population, is supplied with imported flour, mostly by way of Liverpool. Limerick has large mills (as the word is used in Ireland), and their trade is extended over most of central and south portions. The population of Limerick is 46,000. Waterford is credited with a population of 26,000, while Wexford, Tralee, and Sligo are 10,000 to 11,000 each.

In order to compete with the prices and qualities offered by British mills to Irish buyers, and to reestablish trade to the full extent possible, American mills would have to be in shape to make landed terms a full shilling per sack under British quotations. Some inducement on price, and if possible some on quality, would have to be made now that the competition has reached the point it has. With crops and prices favoring America, from now on the way may be near at hand.

SWISS FLOUR TRADE.

COUNTRIES FROM WHICH THE WHEAT IS IMPORTED.

Vice-Consul Leo J. Frankenthal, of Berne, transmits information relative to the wheat and flour trade of Switzerland for 1907. The imports of wheat were as follows in tons (metric ton = 2,204.6 pounds):

From—	Metric tons.	From—	Metric tons.	From—	Metric tons.
Germany	10,984	Bulgaria and Servia ...	4,588	United States	14,064
Austria	15,895	Roumania	125,671	Argentina	44,475
France	1,622	European Turkey	397	Australia	8,174
Italy	382	British India	247		
Russia	238,577	Canada	13,369	Total	468,406

In contrast with the heavy importations of wheat are the following importations of flour in metric tons: From Germany, 24,125; Austria-Hungary, 375; France, 10,045; Italy, 4,007; United States, 253; other countries, 50; total, 38,855.

Russian wheat is preferred to American, even if the American wheat costs the same. The bakers demand a dry wheat that will absorb as much water as possible. Duluth and Manitoba wheat are however, always purchased if the prices are suitable, and are used for mixing purposes. The American wheat is seldom milled pure, but generally with Russian and Roumanian products. Millers say that the American wheat does not produce as much meal when crushed as the Russian.

For a number of years the price of home milled flour has been higher than that of German and French flour, and the imports were doubtless trial shipments. The millers make the same complaint with regard to the American flour as to wheat—that it is not “heavy” enough to be used pure. There is no prejudice, and the situation is caused solely by the peculiar requirements of the Swiss bakers. Bread is seldom baked by families. The principal markets for American flour are London, Amsterdam, Rotterdam, and Antwerp, whence it is imported into Switzerland, when profitable.

A government monopoly of grain has been suggested—a question that is not new in Switzerland—and a report has been requested by the Federal Council. It will be made by the director of the Federal alcohol monopoly.

FOREIGN COAL MINING.

BELGIUM.

NEW COMPANIES ARE ACTIVE, BUT MEET WITH DISCOURAGEMENTS.

Consul H. Abert Johnson indicates that the work of opening up the new Belgian coal fields progresses slowly, writing from Liege:

In reference to the opening up of the new coal mines of the Campine district in the Province of Limbourg, extensive beds of shifting sand have been encountered, which render the work of boring extremely difficult and expensive. One of the companies became so discouraged that it decided to abandon work at Asch, and transferred its operations to Waterscheyd.

In spite of these conditions, the purchasing of ground goes on as actively as ever. Another company has already acquired hundreds of hectares (1 hectare = 2.47 acres) in the valley of the Meuse. The syndicate of Liege capitalists has just bought 50 hectares at Genck and is negotiating for the purchase of an additional tract of 70 hectares at Op-Glabbeek. Another large company has purchased 50 hectares at Genck and an equal quantity of land at Sutendael.

Genck seems now to be the principal center of activity for these pioneer companies, and the purchasers of surface holdings are making every possible effort to hasten the necessary ratifications of their purchases. Notwithstanding these facts, the opening up of these coal fields seems seriously retarded, and some time will yet pass before the first coal from the Campine mines is found on the market.

CANADA.

BORING TESTS FOR COAL IN PRINCE EDWARD ISLAND.

Although coal has been found in great quantities in the near-by Provinces of Nova Scotia and Cape Breton, and successfully mined for years, Consul Franklin D. Hale, of Charlottetown, says that none has been found in Prince Edward Island. He tells of the present movement to discover deposits there:

Geological study by scientific scholars has developed the theory that coal must be found here, but at what depth has hardly been suggested. Different places on the island have been named by geologists as the locations where it would probably be found at least depths, but no serious undertakings have ever been made along the line of its discovery. The Dominion Parliament, acting upon the urgent request of the inhabitants of the island, made through the lieutenant-governor, the premier, and their members in Parliament, has made a grant of \$25,000 to be spent in explorations for coal on Prince Edward Island. Borings will be made at a number of different places to a depth of 2,500 feet, if satisfactory results are not obtained before.

It is expected that the work may be commenced this season, and will be under the direction of an expert agent of the department of mines. The islanders are very hopeful of the results. Should beds of coal be discovered at reasonable depths, there would be no difficulty in financing the enterprise of their development. The consumption of hard coal, which comes from the United States, is about 6,000 tons per annum; that of soft coal from Nova Scotia and Cape Breton is about 77,000 tons. The consumption of hard coal has

nearly doubled in the last ten years. The retail price of hard coal on July 18 at the wharf was about \$6 per short ton. Undoubtedly the prevailing opinion that soft coal for domestic purposes is cheaper than hard coal because of the difference in price is being overcome by practical experiment and use.

BRITISH INDIA.

INCREASING NUMBER OF BENGAL COLLIERIES AND DECREASED LABOR.

From a paper prepared by the Government reviewing the Indian mines act in Bengal during the year 1907, Consul-General William H. Michael, of Calcutta, says that it appears that there has been an increase in the number of collieries, so much so that the district and medical officers are finding it very difficult to inspect all the mines. The consul-general further summarizes:

The Government is considering the question of the nature and amount of the inspection work to be required of these officers. The supply of labor is said to have fallen short of the demand, the prevalence of famine and the willingness of the mine owners to pay a higher rate of wages than what is earned by agricultural and other laborers notwithstanding.

As an inducement to the workmen, some of the companies, e. g., the East Indian Railway Company, have established benefit funds and schools for the education of the children of their laborers. Again, in certain districts the mine proprietors pay a full month's wages to laborers for twenty days' work or even less. Furthermore, during the past year the employers were so very particular about the health of the workmen that the number of deaths from epidemic diseases among the mining population was comparatively diminished. The East Indian Railway Company has set an example in this direction by offering rewards to their employees as an incentive to keep their dwellings neat and clean.

That, despite these many attractions, there is a dearth of labor is said to be due to the popular dislike of underground work. With regard to mining accidents, there was an increase in their number during the year under review, but it is explained that the increase is due to the larger number of mines working and the greater activity in the industry generally.

German Shoe Dealers' Association.

Consul-General Richard Guenther reports that a purchasing combine of German shoe dealers has been the aim and subject of negotiations among a considerable number of the craft who recently met in Frankfurt to organize a cooperative association. About one hundred firms from all parts of Germany have already given their assent to the movement. It is proposed to start the association under the firm name Salvator Schuhgesellschaft, with a capital of 100,000 marks (\$23,800). All the shoes and articles purchased and supplied to the members of the combine are to bear the trade-mark "Salvator." Eventually the cooperative company may furnish supplies to shoe dealers who are not members of the association. If this move proves to be successful, it may afford enterprising manufacturers of American shoes an opening to the German markets.

FOREIGN COTTON GROWING.

FRENCH COLONIES.

A SCHOOL FOR COTTON PLANTERS ESTABLISHED IN FRANCE.

Consul A. Gaulin advises that on July 10 the French minister of commerce officially inaugurated in the city of Havre a school which is the first of its kind in France, its main object being to give a practical training to young men seeking employment on colonial cotton plantations. The consul says further:

The school has been annexed to the leading local technical institution, the Ecole Pratique d'Industrie, which has over 350 students, and it is now known as the Ecole d'Industrie Coloniale. It was founded by the Association Cotonnière Coloniale, which will provide part of the funds for its maintenance, and which has already equipped it with modern machinery sufficient to insure adequate instruction in cotton ginning and baling and oil-crushing methods. The ministry of commerce, the Havre Chamber of Commerce, and the municipality have also agreed to grant annual subsidies.

Only graduates of commercial and technical schools will at first be allowed to follow the course of studies, which will cover a period of ten months and will include the following subjects: The methods of cultivating and handling cotton and the principal products grown in the French colonial possessions, the industrial preparation of these products for export, practical geography and topography, the elements of electrical science, colonial history, French administrative colonial legislation, and colonial hygiene.

The establishment of this school indicates clearly that a serious and systematic effort will be made toward the development of cotton culture in the French colonies. At any rate, it is a very interesting experiment and, as its promoters hopefully predict, it may have far-reaching results.

BRITISH INDIA.

LARGE CROP INCREASE PREDICTED, ESPECIALLY OF BETTER FIBER.

In referring to the production of cotton in India, Consul-General William H. Michael, of Calcutta, notes that a writer in the Indian Trade Journal disagrees with the idea that India can not materially increase her production, and says:

Largely owing to the action of the British Cotton Growing Association in affording facilities, and that of the government of India in starting experimental work in cotton cultivation, an extra million acres were brought under cotton last year; and Professor Dunstan, director of the Imperial Institute, states that already a better description of Indian cotton is being exported to the United Kingdom. The table below shows the exports of cotton by sea from British India to foreign countries during the past five years, but it must be clearly borne in mind that about two-thirds of the cotton grown in India is consumed in this country.

Year.	Hundred-weights.	Value.
1903-4	7,931,075	\$31,258,821
1904-5	5,657,743	58,115,624
1905-6	7,899,534	71,133,396
1906-7	7,400,839	73,261,536
1907-8	8,562,024	85,675,066

The most promising spot for cotton cultivation in India appears to be Sind, where the Egyptian variety, particularly in the canal area, is replacing the indigenous plant. In that locality the area under cultivation is rapidly increasing, and it is believed that the time is not far distant when that province will produce 100,000 bales of almost the finest cotton in the world, worth at least twice as much as the indigenous variety.

In India, as in other countries, the greatest hindrance to the extension of cotton cultivation is the boll worm, which has in past years done immense damage to the cotton crops of Sind and the Punjab canal colonies. But steps are now being taken by means of "trap crops" and other methods to hold this pest in check, and when this task is accomplished India should be in a position to largely increase her exports and so contribute in a greater measure toward the world's ever-increasing demand for raw cotton.

CANADIAN MINERAL OUTPUT.

STATISTICS OF PRODUCTION THROUGHOUT THE COUNTRY FOR LAST YEAR.

Consul-General John G. Foster, of Ottawa, sends the following Canadian newspaper extract covering the Dominion's mineral industry:

The mineral production of the country for 1907 was valued at \$86,183,477, as compared with \$79,057,308 in 1906 and \$28,485,023 ten years ago. The output of the metallic ores was valued at \$42,434,087. The nonmetallic minerals were valued at \$31,217,000 and the structural materials and clay products at \$12,232,330. An estimate of \$300,000 is included in this calculation for mineral products, of which no return was made.

The very large falling off of \$3,230,436 in the gold production—over 28 per cent—practically represents a falling off in every district, with the possible exception of Nova Scotia. There was an increase of \$758,170 in the copper output, a decrease in British Columbia being more than offset by an increase in the copper contents of the Sunbury nickel and copper ores. In pig lead production there was a substantial increase of \$257,907. New furnaces were in operation at Hamilton and Port Arthur. The production of lead was less by about 13 per cent. Nickel shows but little change.

The output of silver was over 50 per cent greater than in 1906, and this despite a falling off in British Columbia, the large increase being due entirely to the shipments from the Cobalt district.

Four years ago gold was relatively the most valuable mineral product in Canada, but in 1907 it had fallen to fifth place. A continual shrinkage has taken place in the output of the Yukon from \$22,275,000 in 1900 to about \$3,150,000 in 1907.

New German Financial Issues.

During the first half of the present year the amount of new issues of bonds and shares listed at the German stock exchanges aggregated 2,267,000,000 marks (\$540,000,000). In furnishing this statement Consul-General Richard Guenther, of Frankfort, adds:

About one-half of the total was for loans and bonds of the Federal Government and the individual States of the German confederation. The loans of German provincial and municipal bodies amounted to \$125,000,000; of bonds issued by the German mortgage banks, \$60,000,000; of mining and industrial stock companies, \$43,200,000; the balance being new bonds and shares of German and foreign railroad and tramway companies, banks, and other commercial, shipping, and industrial institutions.

The lowering of the interest rates has greatly stimulated the placing of these large financial issues. In the preceding half year the total amount of new issues of this kind on the German bourses only footed up \$83,300,000.

SHANTUNG PROVINCE.

CHINESE OPENING FOR AMERICAN TRADE AND CAPITAL.

The following report on the industrial conditions prevailing in Shantung, and the opportunities offering for American capital and trade in that part of China, is furnished by Deputy Consul-General Alvin W. Gilbert, of Chefoo:

Roughly speaking all of Shantung Province east of the intersection of the Hwang River and the Grand Canal is checkered with mines bearing one or more of the following minerals:

Gold, silver, quicksilver, mica, copper, gypsum, lime, glass silicates, basalt, iron, lead, diamonds, and mercury, while clay from which sun-dried bricks are made, building stone, sand, and millstone granite abound. The richest mineral section of the province is that south of the Tsingtau-Tsinan-fu Railway. Comparatively little of this area is being worked. The Germans have a large plant at Fangtze (10 miles south of Weihsien), are working coal at Poshan and vicinity, and have scratched the soil at various other good places.

COMMERCIAL, MINING, AND INDUSTRIAL OPENINGS.

While recently conversing with a progressive Chinese official about commercial enterprises in general, he suggested that an American syndicate should first develop a certain gold mine in which it was interested, and if that were successfully done he thought there would be no difficulty in extending American enterprises in this province. This mine is in close proximity to the proposed Chefoo-Weihsien Railway and has been intermittently, but successfully, worked by the Chinese.

The magistrate at Ichowfu is now trying to form a company for the exploitation of the coal and iron mines in his district with the intention of constructing the railway thereto. The new port, Haichow, in northern Kiang Su, is being developed by the Chinese. The water is too shallow for large steamers, but they are planning to form a lighterage company which would give the port equal facilities with Tientsin.

There is at present a wealthy Chinese family at Tsingchowfu making inquiries as to where they can purchase the best cotton gins, looms, etc., as they wish to establish a large plant. The gins must be so constructed as to handle the small-sized cotton seed which is peculiar to China.

The silk industry (cocoon raising) in the Ichowfu Prefecture is entirely undeveloped, and it is thought that a filature at Ichowfu might be made profitable. Inasmuch as this is virgin territory it would seem that this is the opportunity to make a right beginning profitable from the first. The Shantung cocoons are of a superior quality to those sent over from Manchuria, but are not of sufficient quantity to effectively influence the market. Suitable supervision would doubtless enlarge this industry.

IRRIGATION AND FARM MACHINERY.

Irrigation is as essential a part of farming in this province as is cultivating the growing crop, for without it crops would be impossible. The present method of irrigation is for the most part by hand;

in some places a blindfolded donkey works a turbinal pump. The following methods are workable—others may be better: Windmills rented to farmers too poor to buy, or sold outright for cash or on the installment plan; stationary engines, which would be more practical because of their lifting power.

Where well water can not be obtained in sufficient quantity these power plants could be stationed on the banks of various streams, the Hwang River, and the Grand Canal, whence, by means of a series of reservoirs or tanks, vast areas could be watered.

Scientific irrigation has yet to be introduced in China, and it seems reasonable to believe that if an enterprising corporation should obtain permission to install a sample plant on the lines suggested the advertising thus given would alone repay for the outlay, and a nominal water tax would doubtless more than pay running expenses.

Modern farming methods must win their way in China, through the illustrative method. The Chinese prefer to see the successful working of foreign farm machinery, and then some way must be conceived of enabling the farmer to obtain the implements, as he is usually a poor man. A model farm under foreign supervision might open a way.

RAILWAY AND COACH SERVICE.

The promotion of the governor has somewhat delayed negotiations for the Chefoo-Weihsien Railway, which has been under consideration for the past two years. The local merchants have formed a committee of 20 firms, each one of whom agrees to put up \$25,000 to begin the line, building as far as Hwanghsien first and then agreeing to raise enough more to extend on to either Weihsien or Tsingchowfu. On the other hand, the original concessionaire is pressing his negotiations to a conclusion. The local merchants declare it to be immaterial to them who builds the road, but they must have it. The plan now advanced, and with which they agree, is one similar to that of the Taitsao railway now under construction in the southern part of Shantung, viz: Five-dollar shares, 60 per cent of which must be in Chinese hands, and the road to be entirely constructed and controlled by the Chinese.

As a further indication of the determination of the local merchants (large and small) to have some modern mode of transit and conveyance connecting them with the interior, the Chefoo-Weihsien Transfer Company is now circulating its advertising matter and blank share forms. They intend to have the stock fully subscribed and then request the governor, through the Taot'ai, for permission to go ahead. They will have 400 shares of \$5 gold each, and intend to establish a foreign stagecoach service between Chefoo and Weihsien, running two coaches daily between Chefoo and Hwanghsien, and later putting on an automobile which will make the journey in one day, instead of the six days under present conditions.

[A map of Shantung Province, forwarded by the deputy consul-general, may be seen at the Bureau of Manufactures.]

THE British strawberry crop of 1908 was the greatest in ten years, the total exceeding 60,000 tons. The quality was fine. The retail price fell to 4 cents a quart at one stage. The plants must be covered with nets or the birds would leave nothing for the market.

ABSINTHE PROHIBITION.

VOTE TO ABOLISH THE DRINK FROM SWITZERLAND.

In reporting that the manufacture, importation, and sale of absinthe in Switzerland is now prohibited, Vice-Consul Leo J. Frankenthal, of Berne, gives the following particulars of the recent referendum by which this was accomplished.

In a previous consular report by the writer on the practical workings of the popular initiative in Switzerland, the absinthe initiative was explained at length. It was accepted by the Swiss people on Sunday, July 5, 1908, by a vote of 236,582 against 135,888. The total vote cast was 372,470 from a voting strength of over 807,700, showing that 335,000 voters did not go to the polls. Its acceptance amends the Swiss constitution by a paragraph prohibiting the manufacture, importation, and sale of absinthe in Switzerland. Damages will undoubtedly be paid to the manufacturers in the Canton Neuchatel, where a flourishing export industry had been built up. The Federal alcohol monopoly will lose a large sum annually.

The vote of the French cantons—Geneva, Vaud, Valais, Fribourg, and Neuchatel—where absinthe is consumed, and where, in Geneva and Vaud, its sale was recently prohibited by cantonal ordinances, rejected the Federal initiative by a small majority. The vote in the German cantons, however, where absinthe is practically unknown, turned the tide in favor of the measure. Thus its fate was decided for the citizens of western Switzerland, who were personally interested, by the votes of those in the other cantons, whom the measure did not affect. Central and eastern Switzerland had been appealed to by the western or French cantons to support them in voting in favor of the initiative, while the votes cast show that the French cantons as a whole rejected it.

DETAILS OF VOTE—ANOTHER PROPOSED AMENDMENT.

In some cantons the affirmative vote fell far behind the number of signatures to the initiative petition. In Canton Berne, where 38,337 voters had signed the initiative petition, only 24,593 voted for it, or 13,744 less than the number of signatures originally obtained. In Neuchatel 9,628 signed the petition for the abolition of absinthe, and but 6,340 voted for it upon the day of election. Fribourg shows 9,535 signatures in favor of the petition and 7,144 votes for the measure on election day; Glarus secured 3,420 signatures against 2,800 votes, and Basel-land 4,022 signatures to the initiative and 2,843 votes in the affirmative. A favorite placard of its adherents was a radiant white cross behind the range of the snowy Alps, printed upon a red ground, with the legend, "One for all, all for one. Vote 'Yes.'"

The question now arises how the Federal prohibition will work, since the Federal government has no police force of its own and is dependent upon the cantonal police. If 50,000 of the 135,000 voters against the initiative sign a second initiative, they can force the matter to a popular vote for the second time.

Another constitutional amendment (not proposed by the initiative) was accepted on the same day, and empowers the Federal Govern-

ment to enact regulations concerning trades and handicrafts. This will cause a unification of the various cantonal ordinances regarding apprenticeship, settlement of disputes between capital and labor, and is far-reaching in its scope. The present factory legislation is about to be revised and extended.

GHEENT A SEAPORT.

A DEEP WATERWAY WILL CONNECT BELGIAN CITY WITH THE SEA.

Consul W. P. Atwell, of Ghent, gives the following description of the new harbor and the improved deep canal that will connect that Belgian city with the Atlantic:

The works which have in late years been carried on toward the improvement of the Terneuzen canal are advancing rapidly and the canal connecting Ghent with the North Sea will be completed about the beginning of next year. On Dutch territory the work has lately been pushed with great activity so that the greater part thereof is completed. The last contract for deepening and improving the harbor of Terneuzen, the Dutch end of the canal, was signed and passed by the Dutch authorities December 18, 1907, and provided that within 300 days the new maritime lock at Terneuzen, fitted with machinery permitting the temporary working thereof by hand, be opened to vessels. When this lock is completed it will be worked by electricity. The existing locks permit the passing through into the Terneuzen canal of vessels of not more than 17 feet draft, while the new lock will permit the safe passage of vessels of 25 feet.

The dimensions of the new lock will be 459 feet long, 59 feet wide, and 17 feet deep at low tide. The bridges on the canal will be opened and closed by electricity, while the total distance of 20 miles separating the port of Ghent from the sea will be fitted with electric arc lights placed at intervals of 490 feet. The narrowest part of the canal is 220 feet at the surface of the water and 78 feet at the bottom. The depth is 28½ feet.

The length of the canal improved will be 20 miles; 10½ miles on Belgian territory and 9½ miles on Dutch territory. The total width over water line on Belgian territory will be 318 feet, while at the bottom the width will be 78 feet with a depth of 28½ feet. The width over water line on Dutch territory will be 220 feet with 78½ feet at bottom and the same depth.

Commercial docks will be provided with wharfage facilities of a total length of 5,250 feet, with nine sheds. The depth varies from 17 to 21 feet. Lumber docks will have 919 feet of wharfage, 278 feet wide, with three sheds covering 83,292 square feet. The "foreharbor" will have 7,215 feet wharfage, 295 feet wide, and a depth of 21 feet.

The Terneuzen canal when completed will permit the safe entry of large trans-Atlantic cargo boats. The city authorities are informed that as soon as the improvements are completed a new line of steamers will ply from Ghent to Galveston.

BRITISH POULTRY SUPPLY.

HOME INTEREST AROUSED—EGG AND FOWL IMPORTS.

Consul Joseph G. Stephens, of Plymouth, writes as follows in regard to the poultry and egg supply of Great Britain:

Recognizing the great need for improvement both in the breed and management of poultry, it has been suggested by influential bodies that the College Poultry Farm, Theale, be formed into a national poultry institute and experimental station. In view of the growing importance of the industry and the certain increase of small holdings, the president of the Board of Agriculture has promised the scheme all the support in his power.

The British demand for poultry and eggs exceeds the supply, and great quantities of both are imported from America and the Continent, and especially from Denmark. Over 2,000 cases of poultry from the United States are sold in Plymouth yearly.

To gain a still better market in the United Kingdom eggs should be larger, there should be a better supply in the winter months, and there should be no ground for complaint as to packing. The poultry and sundry products imported from the United States are shipped mainly by the large packing houses, who have their agents and offices in Plymouth and all of the large cities in the United Kingdom. To individuals and smaller shippers it is suggested that they communicate with the leading merchants of the principal towns, and especially with the several industrial cooperative societies.

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MACHINES AND TOOLS.

FRANCE.

SHOP EFFICIENCY AT SURESNES—TOOLS USED AND WORK DONE.

Special Agent Capt. Godfrey L. Carden in the following report gives results of observations during a visit to a large machine works at Suresnes (Seine). He writes from Suresnes, June 18:

Darracq & Cie. are working just now about 800 men in their Suresnes shops. This firm is engaged in the manufacture of automobiles, has at present in hand an order for 400 cabs for service in New York, and has already supplied 300 motor cabs for that city. These New York cabs are supplied with engines of the 4-cylinder, 14 to 16 horsepower type, which this same company is building for service in London and also in Paris. Of the London cabs 600 are of the 2-cylinder, 10 to 12 horsepower type, and in conformity with the London police regulations no seat is permitted alongside of the driver. This lost space is utilized for luggage. The cabs for New York would cost, delivered in Paris about 11,000 francs (\$2,123) each. The cabs building for London service cost in Paris about 9,000 francs (\$1,737) each. All of these cabs are sold to the Compagnie Commerciale, which in turn sells to New York companies.

During a visit to the Darracq shops I was impressed with the snap and vim in the establishment, and am inclined to think that there is more speed developed in these works than in any of the automobile plants I have yet visited. I will not say that the work is better, but do say unhesitatingly that the Darracq & Cie. workmen are pushing the machine tools to a speed approximating fairly close to what Americans are accustomed to see. In consequence Darracq & Cie. are able to estimate very closely on contracts, and this probably accounts for the fact that the establishment is to-day fairly busy with orders.

UNUSUALLY RAPID WORK IN EUROPE.

As an instance of shopwork, the Darracq people are turning down all pistons from the rough castings on Potter & Johnston automatic turret turning and chucking machines. I found a battery of 29 Potter & Johnston latest type tools engaged in this work, and the foreman in charge of the group stated that his men were turning pistons and cutting oil rings in fifteen minutes' time. I was told that the cost for turning down one of these pistons, taking everything

into consideration, is 30 centimes. The men at the Potter & Johnston tools receive on an average from 1.25 to 1.30 francs per hour (24 or 25 cents), and generally one man works three machines. These wages are exceptionally good for French shops. In a report on another French automobile works, it was mentioned that pistons were being turned down on the above automatic machines in twenty-five minutes' time. It would seem, therefore, that the Darracq men are beating this speed by ten minutes. The statement as to the time in the Darracq works for turning down pistons was made to me without any information from me as to the speeds I had observed elsewhere.

The piston work in the Darracq shops, referred to as being performed in fifteen minutes is for engines of 14, 16, and 18 horsepower, and includes the engines for the New York cabs. These pistons have a diameter of 90 millimeters and a depth of 85 millimeters. The automatic machines turn all the face turns, the flat of the head, and cut three oil grooves. One man completes, I was told, about 40 pistons in a working day of ten hours. The total number of automatic machines in the Darracq works, of all makes, is 82.

It costs Darracq & Cie. to finish fly-wheel work for the ordinary sizes 85 centimes each. This cost applies to fly wheels which have an extreme diameter of 400 millimeters and an axle diameter of 100 millimeters. There is a collar around this axle bearing having a diameter of 156 millimeters. The fly-wheel work is handled on Potter & Johnston tools, the work on each wheel being divided between two tools. On a ten-hour per day working basis each workman turns out 15 fly wheels per diem.

AMERICAN AND OTHER FOREIGN TOOLS.

I observed the following makes of American machine tools on the Darracq floors:

Bickford Drill & Tool Company, Cincinnati, Ohio, 12 radial drills; W. F. & J. Barnes Company, Rockford, Ill., drills; Garvin Machine Company, New York, drills; Lapointe Machine Tool Company, Hudson, Mass., reaming machine; Fellows Gearshaper Company, Springfield, Vt., gear shapers; Brown & Sharpe, Providence, R. I., shapers; Acme Machinery Company, Cleveland, Ohio, bolt threaders, headers, and nut tappers; Potter & Johnston, Pawtucket, R. I., automatic turret turning and chucking machines; Cincinnati Milling Machine Company, Cincinnati, Ohio, millers.

The foreign makers were represented by H. Ernault, Paris, lathes; special Darracq designed machines made in Germany; "Ducommun" Mulhouse, boring machines; J. Combes, Paris, machines for finishing up crank shafts; J. El. Rheinecker, Chemnitz, lathes and millers; John Betram & Sons, Dundas, Canada, lathe; Karlsruher Werkzeugmaschinenfabrik, vorm. A. G. Gsokwinot & Co., Karlsruhe, Germany, lathes; J. Dickinson & Co., Keighly, England, drills; Lubin & Weiffenbach, Clichy, France, millers; Prellet, Paris, slotters; Biernatzki & Co., Werkzeugmaschinenfabrik, Chemnitz, vertical millers; Jost & Co., Paris, small vertical drills; Chemnitzer Werkzeugmaschinenfabrik, vorm. John Zimmermann, gear cutters, Leipziger Werkzeugmaschinenfabrik, vorm. W. V. Pittler, Leipzig, 10 automatic machines; La Macerienne, Mezières, France, 30 automatic turret turning and chucking machines; Huré, Paris, small vertical drills; Wanderer, Chemnitz, line of millers; Boehringer Frères, Coppingen, Germany, planer and lathes; Schubert & Salzer, Chemnitz, drills; Aux Forges Vulcain, Paris, boring machines.

WORK DONE BY VARIOUS TOOLS.

The lathes in the Darracq works are all of foreign make, the majority having come from Ernault and from Darracq designs made in

various shops. I observed one Darracq designed machine which bores all valve seats in an engine job at one time. The Bickford tools are being utilized in boring out engine casings. Another Darracq designed machine bores out the four cylinders at one time. These machines were built in Germany after Darracq patterns. I did not observe any jigs in use.

The first cuts on shaft work are made on the ordinary lathes and the work is then finished up on the tools furnished by Combes, of Paris. Most of the lathes and boring tools designed by Darracq are of the double type. Rheinecker has supplied a line of vertical millers here, and I also found a heavy Rheinecker tool designed for rounding teeth edges. "Ducommun" is considerably in evidence, and in addition to the boring machines mentioned in the above list this firm has supplied turret lathes and gear shapers. I counted 14 of these Ducommun gear shapers.

Darracq & Cie. are making 15 types of automobile engines ranging from 7 to 50 horsepower, and which embrace engines of 7, 9, 10, 12, 14, 16, 18, 25, 40, and 50 horsepower. The new cabs which are being built for New York will possess later features than in the first consignment.

From all appearances the Darracq works are at present well stocked up with machine tools, and with the exception of the lathes the installation is, on the whole, quite modern. The turret and hexagonal turret lathe showing is not strong. The shop administration and general executive control of the works is of high order, and this firm can be considered as representing in a high degree the best among modern French industrial plants.

Very recently a new company has been formed, known as Darracq-Serpollet, which was organized with a view of being prepared to undertake heavy orders. This new shop is just now practically idle, but if orders are received which are contemplated it will mean the utilizing of at least 200 additional men. In the shops of this new company I observed 13 Potter & Johnston automatic tools, making a total of 42 of these machines in the two Darracq establishments.

SHOPS AT LYON.

NATIONALITY AND MERITS OF TOOLS.

In the following report, under date of June 24, Special Agent Capt. Godfrey L. Carden describes a visit to a large plant at Lyon engaged in the construction of automobiles. He writes:

The Berliet Automobile Works, of Lyon, are working at present about 1,000 men. This is one of the best automobile shops in France. The greater part of the equipment was purchased within the past half decade, and the plant is the exclusive property of M. Berliet, by whom it was built and developed through his individual efforts.

During a visit I was afforded every opportunity to inspect both the machine tool installation and the work in progress. All the newer shop buildings have been erected within the past five years. They are beautiful in design and strongly built. The framing and supporting is of steel throughout. Berliet appears to have plenty of work in hand, although the statement was made that the shops were

not as busy as at this time last year. I understand that Berliet has had until now a working agreement with the American Locomotive Company, whereby all Berliet designs were availed of by the American connection. This agreement is now ended, and it is said Berliet will shortly undertake to sell direct in American territory.

Berliet is building motor engines ranging from 14 horsepower up to 80 horsepower, and the types include both 4-cylinder and 6-cylinder machines. Ten hours constitute a working day, the morning period starting at 6 o'clock and ending at 11 o'clock, and the afternoon hours extending from 1 until 6 o'clock.

The drive of this shop appears to be electric throughout, and a high speed is maintained. The yearly output is about 1,200 motor cars. This number is exclusive of traffic wagons, for which a special factory has been erected. Taken altogether, the Berliet factories at Monplaisir cover an area of 32,000 square meters. The original shop, erected in 1899, covered only 90 square yards.

TYPE OF CHASSIS BUILT.

The chassis built by this concern are of nickel steel, pressed and tempered. The motor is placed in the front part of the chassis and has vertical cylinders, with exhaust and inlet valve interchangeable. In the case of the 60-horsepower 4-cylinder engine the valves are located on top of the cylinders. The crank shaft is rigidly supported on three plain bearings. The half-time wheels, the driving wheels for the pump and magneto, the cam shafts, with cams cut from the solid and ground after hardening, are all inclosed in the crank chamber and lubricated by the splash of the oil. The automatic lubrication, gear driven from the motor, insures a circulation of oil to the different working parts, and the delivery of oil is in proportion to the speed of the motor. All pistons are of steel, with three rings at the upper part and a fourth ring at the lower part, the latter to prevent the oil passing the piston. Ignition is by Simms-Bosch magneto, gear driven.

Berliet uses a carburetor of his own design. This carburetor is fed from a petrol reservoir located at the back of the chassis, and receives the necessary pressure from a portion of the exhaust gases. Cooling is effected by a radiator of the usual honeycomb type. Circulation of water is secured by a rotary pump, and the circulation of air through the tubes is assisted by a belt-driven fan, placed immediately behind the radiator. The clutches are of the multiple disk type, interlaced, some in bronze fixed to the first-motion shaft and others in steel attached to the motor. These clutches are pressed one against the other by a spiral spring. The change-speed gear from the workmanship standpoint is made up of a lot of very finely machined parts. The shaft, for example, between the motor and gear box is provided with a special joint to insure alignment. The fourth speed as in most types is a direct drive, and in the 40 and 60 horsepower engines there are direct drives on the third and fourth speeds. Berliet uses what he terms a live axle, consisting of two machined-steel forgings rigidly fixed to a central box containing the differential and beveled pinions. To this box is bolted a pressed-steel torque rod, the other end of which is attached to the chassis. The sleeves carry at their extremities strong ball bearings placed exactly in the axes of the wheels and

lodged in the hubs, which are driven by the differential shaft through jaw clutches. There is apparent throughout the Berliet shops evidence of very fine machine work, and the tools used are necessarily high grade in manufacture.

AMERICAN AND OTHER FOREIGN TOOLS.

I observed the following makes of American machine tools on the Berliet floors:

Cincinnati Milling Machine Company, Cincinnati, Ohio, millers; Landis Tool Company, Waynesboro, Pa., grinders; Brown & Sharpe, Providence, R. I., full line of tools; Washburn Shops, Worcester, Mass., drills; Hulburt-Rogers Machine Company, South Sudbury, Mass., cutting-off machine; Fostick Machine Tool Company, Cincinnati, Ohio, drills; Whitney Manufacturing Company, Hartford, Conn., grinders; Garvin Machine Company, New York, vertical millers; National Machine Company, Tiffin, Ohio, chucking machines for bolt-making; Pratt & Whitney, Hartford, Conn., turret lathes and grinders; Potter & Johnston Machine Company, Pawtucket, R. I., shapers; Cleveland Automatic Machine Company, Cleveland, Ohio, automatic machines; Gleason Works, Rochester, N. Y., gear cutters; Fellows Gear Shaper Company, Springfield, Vt., gear cutters; Beaudy & Co., Boston, Mass., steam hammer in foundry department; Mitts & Merrill, Saginaw, Mich., drills.

The foreign tool makes were represented in the Berliet shops by the following:

Blernatzki & Co., Chemnitz, gear cutters; H. Ernault, Paris, lathes, gear cutters, and millers; J. E. Rheinecker, Chemnitz, drills; J. E. Weissner Sohne, Schwerzwaldbahn-Baden, multiple drills; H. W. Ward & Co., Birmingham, England, drills and turret lathes; Alfred Herbert, Coventry, England, turret lathes, drills, and millers; Habersang & Zinzen, Dusseldorf, drills; Lomont-Hurtu, Albert (Somme), planer; Société Anonyme Nielsen Winther, Copenhagen, turret lathes of a type similar in appearance to Gisholt; Wanderer Works, Chemnitz, millers and gear cutters; Webster & Bennet, Coventry, England, millers and lathes; Barrequand & Marre, Paris, vertical millers; G. Birge & Co., Manchester, England, drills; Leipziger Werkzeugmaschinenfabrik, vorm. W. v. Pittler, Leipzig, four automatic turret turning and chucking machines; Simplex Engineering Company, Manchester, England, threaders.

MISCELLANEOUS MACHINES.

Beaudy & Co., of Boston, have one hammer of their make in the forge shop. All other hammers are of French make. Alfred Herbert, of Coventry, has a large line of millers installed here, and in this connection it may be remarked that some of the leading French firms have drawn quite liberally on English machine toolmakers. The situation in this respect is different from what I have found in Germany, Switzerland, and northern Italy. In Germany an English tool was very rarely found, with the exception of a Herbert lathe and some heavy tools for locomotive work.

I found four Pittler automatic turret-turning and chucking machines at work. I had to read the name plate before becoming convinced that these were not Potter & Johnston machines. The latter firm is represented by shapers, but the Leipzig house secured the order for the automatics. In previous reports reference was made to the close approximation of Pittler to some of our standard American work. It matters little whether he can be accused of copying or not, the fact remains that it is very difficult to distinguish between a Pittler and a Potter & Johnston tool, and when there is a difference in price the cheaper machine is apt at the outset to have an advantage. This, however, is the first instance in France coming under my per-

sonal notice where Pittler tools are used exclusively. The prices of the Pittler automatic machines laid down in Lyon were:

No.	Francs.
AT2 admettant 25 m/m de barre-----	4, 450
AT3 admettant 35 m/m de barre-----	5, 350
AT4 admettant 55 m/m de barre-----	5, 950

NEW MERITORIOUS TOOLS DESIRABLE.

I found a number of quite new machines very recently purchased from the Simplex Engineering Company, of Manchester, England; there were eight of these machines in all. The tools are of a type similar to those manufactured by the National-Acme Manufacturing Company, Cleveland, Ohio. The Gleason gear cutters are well liked at Berliet's and were referred to as "very clever machines." In all there are over 500 tools installed in the shops, and of this number about 50 per cent are of American origin. The Berliet establishment will soon devote more of its energies to the developing of traffic wagons. It is the writer's opinion that these works, by reason of the high standard of output, will always welcome new tools possessing merit and affording a reduction in cost of labor. The policy here is a progressive one, and the executive management is marked by a high degree of intelligence. The writer has never visited a plant more open to inspection and an exchange of ideas than this one. Berliet is representative of the best in French industrial development of the present day, and because of this fact no manufacturer, I am inclined to think, need hesitate to call to the attention of the Lyon firm a new machine. This establishment is in the market at all times for the best tools obtainable regardless of origin.

CHINA WOOD OIL.

REPORT FROM FRANCE ON ITS INDUSTRIAL USE.

Replying to a request for information about China wood oil, Consul-General Robert P. Skinner, of Marseille, France, states that it is obtained at present from the seed of the *elaëcocca verrucosa*, a member of the *Euphorbia* family, and must not be confounded with the product obtained from the *dipterocarpus turbinatus*, also so-called wood oil. The consul-general continues:

The fruit of this tree yields 35 per cent of oil, which is colorless, odorless, and tasteless. It is the most siccative of all oils. It is used to close the pores of wood intended to be lacquered. It is also used to paint boats and to preserve woods generally, and for lighting purposes. The Japanese produce wood oil in the provinces of Figo, Sagani, Musasi, and Idzu. The Chinese produce it upon a large scale and export it from Hankow. [A report from Hankow on wood oil was published in Daily Consular and Trade Reports for July 22.—B. of M.]

This oil remains liquid indefinitely while in obscurity, even at low temperatures, but if exposed to the sun in a closed tube it acquires a concrete form in two or three days. The solidification does not appear to affect its neutrality. By saponification the fatty acids obtained furnish a solid and white product.

COMMERCIAL TRAVELERS.**FRANCE.**

[REPORT BY CONSUL-GENERAL FRANK H. MASON.]

The treatment accorded to commercial travelers in France is based on section 24 of the law of July 15, 1880, which reads as follows:

Commercial travelers from foreign countries will receive the same treatment in respect to license which is accorded in their respective countries to commercial travelers of French nationality.

Accordingly, commercial travelers from the United States are entitled and receive the same privileges that are granted in the United States to similar agents from France, which are understood here to be as follows:

Operations of commercial travelers are entirely free. However, the travelers should be provided with documents showing that they are commercial travelers and not brokers, the latter being subject to a tax of \$20.

Traveling agents who carry goods for sale are classified with peddlers or hawkers in France; no special trade license is required, and they cease to be traveling agents in the eyes of French commercial law. As peddlers they must, however, apply for a trade license, which is made out anew at the seat of government in every department visited by the agent. The business tax in such cases varies in a somewhat peculiar way, according to the method of the transportation of the goods. As a rule, the tax is about 8 francs (\$1.55) per year. Aside from this a fee of about the same amount may be exacted by the local authorities who issue the trade license. A renewal of this latter fee is not required on the removal of the agent to some other part of the country, although the license must be produced to the local authorities of each community entered by the agent.

ADMISSION OF SAMPLES.

The admission of samples is governed by the general conditions prescribed in section 397 of the customs regulations, which are as follows:

Articles serving as models or samples introduced by commercial travelers are admitted free of duty on condition of being reexported or placed in bonded warehouse within a period not exceeding one year.

The customs officer at the port of entry at which the models or samples are imported will specify the amount of duty due. The commercial traveler shall deposit in cash the amount of such duties or furnish a valid bond. Each model or sample shall be marked, when possible, with a stamp or seal. The permit or certificate which is delivered to the traveler shall include a list of the models or samples imported, and specify the nature of the articles, likewise the special marks which may serve to identify them, and also the means employed (stamps or seals) to mark the several articles. The certificate will further show the amount of duty due on the models or samples, and whether this amount has been deposited in money or guaranteed by a bond.

No fee is exacted for the certificate nor for the affixing of the stamp or seal. The models or samples may be reexported either through the port of original entry or any other custom-house.

FRENCH COLONIES.

The laws and regulations in force in France are generally applied also throughout the colonies and dependencies of the Republic.

GERMANY.

[REPORT BY MR. BASIL MILES, THIRD SECRETARY, AMERICAN EMBASSY.]

The laws and regulations of the German Empire concerning the treatment of commercial travelers fall naturally under two heads—those concerning the commercial traveler himself and those concerning his samples.

A business license (called "Gewerbelegitimationskarte") is sufficient for a foreign commercial traveler to trade in Germany, provided he comes from a country with which Germany has an agreement on this subject, or to which the right of "the most favored nation" has been extended in this particular respect. In the first instance the commercial traveler's own national license will be recognized in Germany; in the second instance he must take out a German business license (Gewerbelegitimationskarte) in Germany. Commercial travelers from all other countries must procure a "traveling business permit" (Wandergewerbeschein).

Germany has neither made any agreement with the United States with regard to the recognition of business licenses nor does the United States enjoy the right of the "most favored nation" for its commercial travelers in Germany, for neither in the commercial agreement of May, 1907, nor in the treaties in force between the United States and the separate States of the Empire is there any stipulation with regard to applying this right in the case of commercial travelers. Therefore American commercial travelers are not entitled to a "Legitimationskarte," which is valid throughout the Empire, but are required to procure a "Wandergewerbeschein," which is only good in the administrative district in which it is issued. In Prussia both the license and the permit are procured from the "Regierungspräsident," while in the other Federal States other local authorities are designated for this purpose.

The question as to what credentials the commercial traveler should bring with him in order to obtain a license or permit, and what fees and taxes he must pay, are also determined by the various regulations in force in the different Federal States. It is, however, certain that the American commercial traveler should possess a consular certificate of registration, or, better, a passport, and should bear proper credentials from his American employers. In most of the Federal States he will be required to pay an income tax, a business tax, and a fee for his permit. He must also be more than 25 years of age, and of a character to which the police can take no exception; otherwise his application for a permit may be refused.

ADMISSION OF SAMPLES.

According to the tariff provisions of the act of December, 1902, which are applicable to all countries, sample cards and samples, in pieces or patterns, which are to be used as samples only—with the exception of samples of foods or luxuries, including mail samples or specimens of coffee, cocoa, sugar, tobacco, and dried fruits up to 350 grams (0.77 lb.) weight—may enter free of duty. However, goods designated as samples which by their nature may also serve another purpose are dutiable in so far as they have not been rendered unfit for sale under the terms of the regulations governing the issuance of a free customs permit.

On the other hand, the right is not extended to the United States, which is allowed to certain other countries on the basis of reciprocity, by which dutiable articles serving as samples or specimens are allowed free entry on the understanding that their identity is preserved and their reexport accomplished within a stipulated period of time. This disadvantage is due to the fact that no corresponding privilege is allowed to Germany by the United States.

American commercial travelers do not enjoy advantages arising from those agreements with several other countries (France, Great Britain, Belgium, Switzerland, Sweden, and Austria-Hungary) by which official marks for the preservation of the identity of samples or specimens brought in from and reexported to one of these countries are recognized.

WALNUT CROP IN FRANCE.

GOOD GROWING SEASON—PROBABLE YIELD OF DIFFERENT QUALITIES.

Vice-Consul T. W. Murton, of Grenoble, submits the following report, dated July 25, on the growing crop of walnuts in that consular district in the French valley of the Isère:

The weather thus far having been variable and temperate, with frequent copious rainfalls and comparative freedom from excessive heat and the damaging hail and thunderstorms that usually follow, vegetation has prospered, and all standing fruit crops, grapes more especially, give promise of excellent yields. As to walnuts, while the fruit-bearing trees of the finer qualities, commercially known as Mayettes, Franquettes, and Parisiens, are luxuriantly foliaged and healthy in appearance, it is not expected that the production in nuts will much exceed half an average crop, or, say, from 15,000 to 20,000 bales of 100 kilos each (1 kilo = 2.2 pounds). The fruit is well developed, being unusually large for the season, and promises to be of excellent quality. The reason assigned for so small a crop is the prolonged drought of 1906, from the effects of which the trees have not yet entirely recovered.

Of the smaller varieties, known as Chabertes and employed exclusively for confectionary purposes, a plentiful crop is expected—estimated at 45,000 to 50,000 cases of 25 kilos each. The quality also should be good, always provided weather conditions continue favorable for the growing crops until maturity. In such case harvesting time will be in advance of last year by about fifteen days.

German Canal Liability Decision.

A report from Consul-General Richard Guenther states that the Supreme Court of the Empire, the highest judicial body in Germany, has just rendered an important decision. The lighter of a private shipping firm was injured in the Kaiser Wilhelm Canal by a steamer which got loose from its moorings. The Government declined paying damages and disclaimed liability as the regulations for the traffic through the canal contain the stipulation: "The German Empire assumes no responsibility whatsoever to recompense for any damages which vessels passing through the canal or lying on the roadsteads at either end may suffer, etc." The lower courts before which this case had been tried decided against the Government and, on appeal by the latter, the Supreme Court has now affirmed that decision.

KONGO COMMERCIAL OPPORTUNITIES.

FUTURE OF THE HEART OF AFRICA—HOW AMERICANS MAY PARTICIPATE.

In view of the fact that the status of the Kongo Free State is now more definitely arranged and that its development is commencing, Consul-General James A. Smith, of Boma, has prepared the following review of the commercial aspects, and how Americans may best secure business in that vast region of mid-Africa with 900,000 square miles of undeveloped territory:

The Kongo may soon offer an opportunity for every independent trader to traffic freely with the natives in the rich commercial products of the country, consisting mainly at present of rubber, ivory, gum copal, palm kernels, and palm oil, the two latter being principally products of the lower Kongo. Under such circumstances it appears important that the American manufacturer should be informed, so far as is possible at present, of the opportunities which will be found here to dispose of his goods and the best manner in which he can obtain a foothold, and to have clearly pointed out some of the difficulties he must encounter and overcome if American trade in the Kongo is to increase.

CLASS OF GOODS AT PRESENT IMPORTED.

Importations into the Kongo average at present, in round numbers, \$4,000,000 annually. Of these the principal items, comprising, as will be noted, about 88 per cent of the total, are as follows:

Arms and ammunition-----	\$178, 000	Metals-----	\$212, 000
Clothing-----	251, 000	Steamers, boats, and material	
Food products, mostly canned		for	278, 000
meats, vegetables, etc-----	782, 000	Tissues, mostly cotton piece	
Hardware, enameled iron ware,		goods-----	1, 146, 000
etc-----	156, 000		
Liquors, including beer-----	336, 000	Total-----	3, 547, 000
Machinery-----	208, 000		

So far as the natives are concerned, who are the most important to consider because the bulk of future trade will be carried on with them, the items of greatest interest to the American manufacturer in the foregoing list are, in the order of their value, cotton piece goods, bleached and unbleached, prints and dyes; food products, consisting for the greater part of canned meats and vegetables, largely consumed, it is true, by the white population at present, but for which a demand can be created among the natives; clothing, the bulk of which is cheap underclothing, shirts, shoes, hats, and caps; hardware, of which an important part is enameled iron ware, plates, basins, various kitchen utensils, etc.

The remainder of the articles are for the larger part imported for use in building and opening up the country for the whites, construction and maintenance of railways, steamer lines, etc. The sale of alcoholic liquors to natives in the upper Kongo is forbidden by law.

PRACTICAL METHOD TO SECURE TRADE.

The question of methods to secure trade must be regarded from the standpoint of the interest of the American manufacturer and not of the individual small trader. There is but one practical way for the American manufacturer to secure and retain a foothold in this market,

which promises results materially increasing American foreign trade here and which will eventually make the venture worth while. It is not likely that American goods will ever reach this market to any large extent except directly through an American company located here. Every trading house already established in the lower Kongo—English, French, German, Dutch, Portuguese, or Belgian—is interested, primarily, in pushing the sale of the goods of its own nation. The large concessionary companies are all Belgian, they purchase the greater part of their supplies in Belgium, and their barter goods are mostly Belgian. As a Belgian colony, the future administration will be interested first of all in encouraging and broadening the market for Belgian manufactures.

Geographical position and direct lines of steamers from almost all the countries named are other important factors favorable to their trade development here. For these reasons, I believe, there is but one practical and efficient way by which we can succeed in gaining a firm foothold here—namely, through the organization of an American trading house composed preferably of a combination of various American manufacturers or of dealers in the different lines of merchandise it is found profitable to handle, and interested therefore before all in introducing and pushing exclusively American goods. A number of general stores should be established in favorable localities, with a central distributing warehouse and store at Leopoldville.

DISTRIBUTION OF SUPPLIES—COMPETENT SALESMEN.

The company should own and operate its own steamer or steamers on the upper river for the transport of its goods and distribution to the various stores established, as well as the carrying to Leopoldville of the merchandise received in exchange—rubber, ivory, etc. The network of navigable waterways furnishes the most convenient means of communication at present, but freight rates on the steamers belonging to the State are high and portorage "a dos d'homme" is slow and uncertain and must eventually be done away with entirely.

A thoroughly efficient and practical business man should be sent out to study the general situation, the wants of the natives, manner of packing goods for tropical countries, etc., and decide as to the most favorable localities for the establishment of the stores. The preliminary work would doubtless require fully a year's time. Cotton piece goods will form the principal article of commerce at first, but it would be unwise for the company to confine itself to any one line. Through contact with the whites the material wants of the natives will gradually increase, and the company must be prepared to supply these wants in every direction.

DIFFICULTIES TO OVERCOME.

In the absence of money as a circulating medium of trade, and the entire ignorance of the greater part of the natives in the upper Kongo as to its value or use, the trade in the beginning will be simply a question of barter. For this reason, perhaps, the greatest difficulty which a trading house will meet with at first will be to persuade the native to bring in his produce in exchange for goods offered. Some time must necessarily elapse and a constantly humane, just, and gen-

erous treatment invariably accorded the native before he will begin to realize the material advantages to be gained by himself in trading with the white man. Once he is certain of this the most difficult obstacle to trade will have been overcome.

An American house without experience in Africa will have to compete with English, French, German, Dutch, Portuguese, and Belgian companies, and in the eastern districts with Indian and Arab traders, many of them of long standing in the lower Kongo, familiar with the country and the ways of the natives, speaking the commercial language, etc. Many of these traders will doubtless enlarge the field of their operations in the upper Kongo. The Germans are already preparing for the opening up of the country to trade, as I learn that a German house at Matadi, backed by official encouragement, is to place a steamer at once on the upper river and commence operations by selling goods along the river direct from the steamer in exchange for ivory.

Another difficulty is the absence of direct lines of transportation. American sailing ships already, I believe, come to Sierra Leone and the West Coast with cotton goods and petroleum, and their itinerary might, it would seem, be extended to the lower Kongo.

GENERAL OBSERVATION.

In the development of the country the native must necessarily play an important part. His labor is absolutely essential to the future welfare of the colony, and he will be the principal purchaser of foreign goods. In a colony of at least 20,000,000 blacks, who will be brought, as the country is opened up, more and more into constant contact with white civilization, and whose material wants will in consequence continually increase, the future market will be one of constant growth and practically unlimited extent. If the United States is to share in this market in any appreciable measure the present is the time to make a beginning. It is the man who is the first on the ground who will have the advantage in an experience gained in dealing with the native, and who will consequently secure the larger and more profitable share in the trade. The difficulties do not appear by any means insurmountable. Enterprise directed intelligently, patience, and tenacity are required here as everywhere else to secure and hold a market against active competition.

The opportunity is a grand one and should not be neglected. A consular officer can do no more than point this out. It remains for American manufacturers to take advantage of the situation and make a beginning here at the earliest possible moment. Details as to prices of cotton piece goods, etc., can not be given because, dependent as they are upon the cost of transport, they vary widely in different sections and have been, up to the present time, more or less arbitrary.

Mails for Tahiti.

In relation to a report that correspondence destined for Tahiti is frequently missent to Seattle, Wash., for dispatch, the Post-Office Department announces that mails for Tahiti are dispatched only by steamers sailing from San Francisco, and that the mails referred to must therefore be forwarded to San Francisco.

ELECTRIC POWER IN IRELAND.

PARLIAMENTARY BILL FOR FRANCHISE OF UTILIZING PEAT.

Consul Alfred K. Moe, of Dublin, calls attention to the scheme recently developed to utilize the peat in the extensive bogs of central Ireland for the purpose of generating an electric power supply sufficient to drive the mills, run railway lines, and light the various cities and towns of central Ireland. The consul, under date of July 21, announces the progress of the enterprise:

For the purpose of organization and working it was necessary to obtain the sanction of Parliament to the scheme of the promoters, and during the past week a number of hearings have been given by the Parliamentary committee appointed to hear argument on the merits.

The bill proposes to authorize the erection of a station at Robertstown, County Kildare, 27 miles from Dublin, for generating electricity from peat moss, the peat to be taken from the Bog of Allen, to supply electric power to the surrounding districts. The bill had originally sought the right to supply electricity to Dublin and adjacent townships, but Dublin, Pembroke, and Rathmines have been struck out.

It is said that a number of agreements for the supply of power have been made, among them being several for the supply of electricity to suburban street railways. The money required for the enterprise is said to be waiting only for the passage of the bill before being turned in as capital for the new company.

When the bill was before the committee on public hearing an original director of the Manchester ship canal said they had tried gas produced from Irish peat, containing from 50 to 60 per cent of moisture, and found it to be very good. The scheme, from a public point of view, he thought, would employ a considerable number of persons and would be a commercial success.

One of the joint engineers of the enterprise stated that the area comprised in it was 847 square miles. Arrangements have been made, he stated, for the overhead transmission of the power, and he did not anticipate any difficulties under that head. The works they proposed to set up would give them 15,000 horsepower for fifty years on a 30 per cent load factor.

The bill, which, if it becomes a law, will be in the nature of a franchise, has been strongly opposed by several corporations near this city, including the Dublin Gas Company, on the grounds that the introduction of electric power on such a scale would seriously interfere with their present rights.

Exports from Amapala to the United States.

According to returns furnished by Consul William E. Alger, of Tegucigalpa, Honduras, the exports from the consular agency of Amapala to the United States during the six months ended June 30, 1908, amounted to \$352,276. The principal exports were: Gold bullion, concentrates, and cyanide precipitates, \$145,173; silver bullion, concentrates, and cyanide precipitates, \$197,271. The balance of the exports (\$7,832) were made up of small lots of hides, deerskins, india rubber, etc.

WIRE-SCREEN TRADE.

AMERICAN MAKERS HAVE NOT PROPERLY EXPLOITED BRITISH MARKET.

Consul Albert Halstead, of Birmingham, furnishes the following report concerning the use of wire screens in the United Kingdom and the failure of the American manufacturers to properly exploit that market:

As a result of a report from this consulate, made about two years ago, one of the principal American manufacturers of wire screens entered the field here by appointing a special agent in England, but later left the business with London merchants, so the field, as far as can be learned, has not been cultivated as carefully as it seemed to warrant. It is true that a number of people have insisted that the insect pest is not sufficient in the United Kingdom to make the sale of wire screening a profitable undertaking, but if the best approved methods of salesmanship were employed, the United Kingdom would, in time, become a profitable market for wire screens for all kinds of houses.

This matter has been again brought to my attention by an article in a local paper which described the difficulties in the public market here during the past few weeks when flies were found to be a great nuisance. I also note in a leading local daily an article from its London correspondent, as follows:

Mr. Burns's energy at the local government board is finding an outlet in various directions which have not hitherto been covered by that department, and one of the latest ideas emanating from the board is the institution of an investigation by specially appointed experts into the subject of flies as carriers of disease. Scarcely a more useful inquiry could be started, and the professor of biology at Cambridge is named as one of those who will conduct the investigation, which is also to receive assistance from the experts at South Kensington.

If this investigation shows, as it has shown elsewhere, that flies are dangerous carriers of disease, the publication of that report should help the people of the United Kingdom to realize the importance of protection against them by screens, and should make the introduction of wire screens next summer in the United Kingdom an opportunity that should not be neglected.

The sale of wire screens can not be successfully undertaken in Great Britain unless agents are selected who know the people and their customs, and who are able to demonstrate the real utility of the screens. At the same time it should be clearly understood that any company undertaking to sell wire screening in the United Kingdom can not expect immediate profitable results, and it should regard the expense of entering the British market as an investment of capital upon which return later can be expected. In view of the fact that the United Kingdom is such a distributing point for the rest of the world, the establishment of an agency in London should make it easier to sell wire screens to those countries which are accustomed to come to the United Kingdom for many of their requirements.

A LAKE at Bassein, Burma, owned by the government, stocked with varieties of table fish, brings an annual income of over \$6,000. The Burma government is taking steps to utilize Victoria Lake in the same way.

PURE-FOOD LAW OPERATIONS.

FRENCH EXPORTS TO UNITED STATES ARE AIDED BY IT.

Consul D. I. Murphy reports that so far as the records of the Bordeaux consulate disclose, there has been no diminution in the export of French foods and food products to the United States, consequent upon the enforcement of the pure-food law. On the contrary, the declared values of exports of such products during the first year of its operation actually increased. The consul's details of this trade follow:

As its exports to the United States consist chiefly of wines, oils, preserved fruits, vegetables, and fish and other foods, Bordeaux would naturally be one of the first places to feel the effects of changed conditions under which such products are permitted entry.

Many inquiries are made here as to the effect of the law on Bordeaux's trade, and surprise and gratification have frequently been expressed as to the statistics. Of course for a time after the law became operative (January 1, 1907), there was some confusion in the minds of shippers as to its provisions and some disturbance of trade, but the result has been on the whole beneficial.

The following table, showing declared values of foods exported from Bordeaux to the United States in 1906, compared with 1907, may be of interest:

Articles.	1906.	1907.	Increase.
Alimentary paste (macaroni, etc.).....	\$636,147	\$682,986	\$46,789
Jams and jellies.....	13,710	33,631	19,921
Olive oil.....	238,812	352,563	63,753
Preserved fruits.....	150,095	184,808	34,706
Preserved vegetables.....	172,976	228,108	55,132
Still wines.....	636,147	682,986	46,789
Sparkling wines.....	34,049	39,958	5,909

Other articles classed as foods show decreased exportation, but the decrease in almost every item may be properly accounted for without reference to the pure-food law. Exports of brandy, for instance, fell off in 1907 as compared with 1906 to the amount \$11,285, but the records show a much greater falling off in 1906 compared with 1905—no less, indeed, than \$106,515. The decrease in preserved fish, which was considerable, was due solely to the practical failure of the sardine fisheries, the packers here having been utterly unable to supply a hundredth part of their American orders. Exports of fungi fell off in 1906 to the amount of \$61,417, as compared with 1905, while in 1907 the decrease was but \$25,842, compared with 1906.

As for liqueurs, with slightly decreased export in 1907, the falling off is due to the provision of the pure-food law forbidding the use of certain coloring matters, and the difficulty the manufacturers have found in finding proper substitutes.

Considering the financial depression of 1907, the showing seems rather remarkable. It leads to the belief that instead of hampering trade, the pure-food law has benefited it, and it seems to have carried with it a greater respect for foreign labels.

ITALIAN RAILWAY PROGRESS.

EXPENDITURES AND SCOPE OF WORK PLANNED FOR SEVERAL YEARS.

Vice-Consul W. Bayard Cutting, jr., of Milan, submits the following report on Italian railway appropriations:

The law for the construction of new railways in Italy, which has been under discussion for some months, has finally been promulgated. It provides for the expenditure of \$107,000,000 during the next sixteen years and the construction of 992 miles of new roads, as well as the improvements of existing lines. Only \$772,000 is appropriated (outside of the regular budget) for the year 1908-9; but in 1909-10 the amount will be \$8,357,000; in 1910-11, \$13,549,000; in 1911-12, \$13,896,000.

The two largest appropriations (of \$29,000,000 each) are for the improvement of the direct lines between Genoa and Tortona (which will shorten by 16 miles the distance from Milan to Genoa) and between Florence and Bologna. The direct line between Naples and Rome receives an appropriation of \$17,000,000. The improvement of communications in the southern provinces is provided for as follows: Sicily, \$5,800,000; Basilicata, \$17,300,000; Calabria, \$1,350,000. An amount of \$5,600,000 is given to the line from Archangelo to Urbino, \$1,737,000 to the Piedmontese roads, and, finally, a sum of \$965,000 has been put at the disposition of the Government for the study of railroad problems and of the new lines most needed by the country as a whole.

A certain number of lines which particular sections have eagerly pressed upon the Government have been omitted from the new law. Others, while agreed upon in principle, have still to be considered in detail. The law is accepted with favor, as a remedy of the most pressing disabilities and a provision for the most urgent and immediate necessities of Italian commerce.

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TARIFF NOTES.

FRANCE.

SUPPRESSION OF ADULTERATED WINES AND LIQUORS.

Consul-General Frank H. Mason, in transmitting a copy of the recently promulgated regulations for the suppression of adulterated wines, sends the following succinct summary of the new decree:

On September 3, 1907, an executive decree was issued by the President of the French Republic, prescribing elaborate regulations for the enforcement of the law of August 1, 1905, for the suppression of the production and sale of falsified wines, liqueurs, and other alimentary products. By the terms of the decree a delay of six months was given to enable everyone concerned to regulate and adapt his business to its requirements, and it therefore went into effect on the 8d of March, 1908.

The statute and the decree form the culmination of a long series of enactments which have been adopted, and more or less imperfectly enforced, during the past thirty years for the suppression of frauds and adulterations in the manufacture and sale of drinks and food products. These several statutes and decrees have been collected and published in a pamphlet edition, two copies of which are transmitted as exhibits with this report. This pamphlet contains the full official text of all laws now in force in France on this general subject from the statute of August 14, 1889—which was so constructed as to enable any purchaser of wine in France to know exactly the nature of the product purchased—down to the decree of September last, which sums up and includes the substance of all preceding legislation on the same subject.

STRINGENCY OF LAW.

The general nature of these regulations will be readily inferred from the following sections of the decree, which are selected for translation because they will indicate most concisely the spirit of the system of pure-food regulations which is now enforced in France:

ARTICLE 1. No beverage shall be kept or transported for the purpose of sale, or sold or offered for sale under the name of wine, which is not derived exclusively from the fermentation of fresh grapes or the juice of fresh grapes.

Article 6 forbids the keeping, transportation, sale, or offering for sale as brandy, spirit of wine, or vinous alcohol, any product which is not derived exclusively from the distillation of wine, and the same restriction is made to

cover cider, kirsch, prune brandy, and liquors derived from other fruits. Each is required to be the pure, unmixed product of a designated fruit, under the name of which it is sold. This prohibits all admixture of alcohol derived from potatoes, grain, or other farinaceous materials.

The decree is especially stringent in regard to labels, names, and designations of wines and liquors.

Articles 10 and 11 provide for the absolute protection of the recognized and established names of wines, based on the château, vineyard, or district from which they are derived. Article 11 prescribes that "It is forbidden that any dealer in wines, brandy, or other liquors shall use in labels, marks, invoices, or other commercial papers, or on packages or receipts, the word 'proprietor,' 'wine grower,' 'agent,' 'merchant,' or 'dealer' in a product bearing the name of a region or a special vintage from a district or territory in which he does not own property or vineyard or a commercial establishment."

MARKS AND TERMS.

The use of special names of estates, vineyards, or districts on labels, corks, capsules, casks, packing cases, invoices, or advertisements in any way which can deceive or confuse the mind of a purchaser as to the origin, nature, quality, or value of any wine, liquor, or cordial kept or offered for sale or sold, is forbidden under exemplary penalties.

All blended or mixed wines, even if composed of two or more pure wines, must be marked "fantaisie" (artificial) in letters as large as those of the name under which the mixture is sold. Any champagne grown outside the departments which form the old province of Champagne must be so labeled as to indicate that fact and its place of origin. The generic designations "Bordeaux" and "Burgundy" may not be applied to wines blended with those of any other district.

In brandies the term "Cognac" is reserved exclusively for brandies distilled in the departments of the Charente and the Charente Inférieure, the original district, the mart of which is the city of Cognac, and which has an exclusive right to the title.

The ministries of justice, agriculture, commerce, and industry are all charged with the execution of the decree, so that the whole code of pure food and drink laws and regulations has behind it the full vigor and authority of the French Government.

RESTRICTIONS IN MANUFACTURE OF TIN CANS FOR FOOD.

The British Board of Trade Journal of July 16 contains a report from the British ambassador to France to the effect that a circular was recently addressed by the French minister of the interior to the prefects throughout France, instructing them to publish regulations concerning the manufacture of tin cans for provisions, prohibiting the use of tinplate and of inside solder, other than those made with pure tin, and of paint containing lead. The restrictions regarding tinplate and solder are said to be already in force, but that relating to the use of paint containing lead is new. The sale of tin cans not made in conformity with these regulations is prohibited, and the ambassador remarks that this prohibition will presumably affect the importation of such cans into France; he is informed that instructions in this connection have not yet been issued to the French customs authorities, but that they will doubtless be sent in due course.

GREAT BRITAIN.

NEW REGULATIONS GOVERNING INSPECTION OF FOREIGN MEAT.

Consul-General Robert J. Wynne has forwarded a copy of the draft of new regulations of the British local government board for the inspection of foreign meat. These regulations are to come into operation on November 1, 1908, and will apply to and have effect throughout England and Wales. [The regulations may be seen at the Bureau of Manufactures.]

SOUTH AFRICAN CUSTOMS UNION.

RESULTS OF INTERCOLONIAL CUSTOMS CONFERENCE.

Supplementing previous reports on the Intercolonial Customs Conference published in the Daily Consular and Trade Reports, Vice-Consul-General G. L. Foster, of Cape Town, transmits the following resolutions adopted by the conference, by which the existing arrangement is to remain in force for at least another year:

This conference, having regard to the practical impossibility under existing conditions of reconciling the differences in the financial requirements and economic policies of the various South African governments; having regard also to the fact that, if a satisfactory settlement results from the proposals for closer union, any alterations now made in the customs and railway tariffs must of necessity be temporary and provisional, decides that it is inexpedient to disturb existing fiscal arrangements, and that the present customs convention be continued until June 30, 1909, subject to such minor modifications as may be agreed upon at this conference, and thereafter, for periods of twelve months, provided that any party thereto may give not less than three months' notice, either before or after June 30, 1909, of its wish to amend the convention, or its intention to retire therefrom as from June 30, following such notice.

It was also decided that the National Convention on Closer Union should open its sittings at Durban, but the date of meeting will depend upon the intervening sessions of the various colonial parliaments.

CHANGES IN RATES OF IMPORT DUTY.

Under date of June 24 Vice-Consul-General G. L. Foster transmits a statement of the changes in rates of duty agreed upon at the Inter-Colonial Conference. The consul states that while it has been arranged to collect duties from June 24 according to the alterations, ratification of the changes is necessary by the various parliaments before they can be said to become permanent and legal. Such ratification is confidently anticipated. The changes in rates are as follows:

BEADS.

Under the tariff of 1906, beads are divided into two classes: "Kafir" beads, which were rated at 6½d. (12.5 cents) per pound, with a rebate of one-fourth pence (one-half cent) in favor of the United Kingdom and reciprocating colonies, and "other beads," which were rated at 15 per cent ad valorem, with a rebate of 3 per cent ad valorem in favor of the United Kingdom and reciprocating colonies. The new tariff makes no distinction between "Kafir" and "other" beads, which in future will be rated at 6½d. per pound, or 25 per cent ad valorem, whichever duty shall be the greater, with a rebate of one-fourth pence, or 3 per cent ad valorem, as the case may be.

The total importations of Kafir beads into British South Africa last year was 540,819 pounds, valued at £15,619. No beads appear

as having been imported from the United States for the past two years.

BARLEY, MALTED.

Under the tariff of 1906 the duty stood at 2s. (49 cents) per 100 pounds, with a rebate of 2d. (4 cents) per 100 pounds in favor of the United Kingdom and reciprocating colonies. The new duty is 2s. 9d. (67 cents) per 100 pounds, with a rebate of 3d. (6 cents).

The total importations of malt into British South Africa in 1907 were 14,148,418 pounds. In 1906 malt was imported from the United States to the value of \$403.92. In 1907 there were no importations from the United States.

GLUCOSE.

The duty on glucose in bulk under the 1906 tariff was 3 per cent ad valorem, the whole of which was rebated on imports from the United Kingdom and reciprocating colonies. Under the new tariff the duty is raised to 3s. 6d. (85 cents) per 100 pounds and no rebate is allowed.

The total imports of glucose into British South Africa in 1907 were 2,179,555 pounds. The importations of glucose in 1906 and 1907 were principally from the United States, being for those years 2,843,144 pounds and 2,179,555 pounds, respectively, or 91 per cent in 1906 and 68 per cent in 1907 of the total importations.

VINEGAR AND ESSENCES THEREOF.

The duties on vinegar remain practically unchanged, except that the definition of vinegar, which in the old tariff described it for customs purposes as "vinegar of standard strength, fit for immediate use as such," has been omitted, and the duty will now be applied to vinegar of any strength, not exceeding the strength of proof, proof being held to be equal to 6 per cent of absolute acid. The new tariff, however, provides that there shall be an additional duty of 4d. per degree for each degree of strength in excess of proof.

Included in this scale of duties, under the new tariff, are extracts or essences of vinegar, acid, acetic and pyroligenous. The duty existing hitherto on acetic acid has been 3s. 3d. (79 cents) per gallon, and the additional duty of 4d. per degree of strength in excess of proof will, of course, involve a very heavy increase in the rates on extracts, essences, and acetic acid.

Very little vinegar has been imported from the United States, the value of that in 1906 being \$150.86 and that in 1907 \$583.98. No vinegar in bottles and no extracts or essences of vinegar were imported from the United States in either of those years.

RIDING SADDLES.

Under the 1906 tariff the duty on riding saddles was 15 per cent ad valorem, with a rebate of 3 per cent ad valorem in favor of the United Kingdom and reciprocating colonies. Under the new tariff the duty is raised to 25 per cent ad valorem, with a rebate of 3 per cent ad valorem.

The importations of saddlery and harness from the United States of America in 1906 only amounted in value to \$6,949.36, and those in 1907 to \$2,744.71. No returns for the separate articles are obtainable.

CUPS, MEDALS, AND TROPHIES.

"Cups, medals, or other trophies imported for presentation as prizes at examinations, exhibitions, shows, or other competitions, not of a

public character, for skill or sport" have hitherto been admitted free. The new tariff provides for a duty of 15 per cent ad valorem, with a rebate of 3 per cent ad valorem in favor of the United Kingdom and reciprocating colonies.

These items are principally imported from England, and do not interest the American manufacturer.

OILS.

"Oils: Palm, palm kernel, cotton seed, and cocoanut, in bulk, not intended for manufacturing purposes" are rated under the new tariff at 15 per cent ad valorem, with a rebate of 3 per cent in favor of the United Kingdom and reciprocating colonies. These, with the exception of cocoanut soap fat, the duty on which remains unchanged, hitherto have been admitted free.

The principal item under this heading which will be affected in the trade with the United States is cotton-seed oil. In the years 1906 and 1907 the respective importations of cotton-seed oil from the United States were 118,018 gallons and 108,885 gallons, exclusive of some imported as salad oil. The principal importations were in bulk.

POTASSIUM AND SODIUM CHLORIDE.

The duty on these articles has hitherto been 3 per cent ad valorem, with a rebate of the entire duty on imports from the United Kingdom and reciprocating colonies. Under the new tariff the duty is raised to 15 per cent ad valorem, with a rebate of 3 per cent ad valorem in favor of the United Kingdom and reciprocating colonies. Importations of these items from the United States for the past two years do not amount in value to \$100.

VENEZUELA.

CLASSIFICATION OF COARSE CAMEL HAIR CLOTH.

Consular Agent John Brewer reports from Caracas under date of July 3, that according to the decree of July 1, 1908, camel hair cloth employed in the extraction of cotton-seed oil, is to be dutiable under class 2 of the customs tariff of Venezuela (at the rate of 1.93 cents per 2.2 pounds).

Progress of Chinese Chamber of Commerce in Borneo.

Consul Lester Maynard, of Sandakan, sends the following report on the organization of a Chinese Chamber of Commerce there for the purpose of better directing the development of trade in the island of North Borneo:

The organization of the North Borneo Chinese Chamber of Commerce was effected at Sandakan in December, 1907, and now has 130 members. The chamber will construct a suitable building for permanent headquarters and the government has been petitioned for the gift of a building site. The declared purpose of the organization is the protection of the interests of the trade of the country; the collection and classification of trade information; the establishment of a court of arbitration to adjust commercial differences which may be referred to it, and correspondence with public officials and with other commercial organizations for benefit of its members and the development of trade.

MEXICO'S BOOK PURCHASES.

PEOPLE DEMAND LITERATURE THAT APPEALS TO THE EMOTIONS.

Consul-General A. L. M. Gottschalk, before leaving Mexico City, reported that in the central and southern portion of Mexico there is a constant and increasing demand for American books and magazines. He wrote:

The territory covered by this report is the central and southern part of Mexico; the northern border, by reason of its proximity to the United States, would present a different situation in regard to the trade in American books and magazines. In the capital city and the surrounding districts, where there are over 5,000 Americans and where a recent directory [on file in Bureau of Manufactures] shows a list of English-speaking residents, there are several stores devoted to stationery and bookselling which supply smaller merchants in the minor cities of central and southern Mexico with American books and periodicals. A feature which occurs to one in looking over the stock of a number of these stores is the absence of the British magazines, and excellent, cheap, paper-bound novels that are so often brought from England to Spanish America, and which often successfully compete with American publications.

It should be noted that many stores of Mexico City order largely from the United States in gift books, Christmas booklets, and cards during the holiday season. A number of stores are kept by Americans, and their stock and general sales are greatly beyond what might be expected from the limited number of compatriots residing here. The accounts of one of these stores shows the following surprising record of sales: American weekly and daily papers received each month, approximately 5,000, of which 90 per cent are sold; American monthly magazines received, of which 95 per cent are sold, approximately, 2,350. Sales of American books, per year: Miscellaneous, 3,000; current fiction, 4,000; standard authors, 1,000; technical books, including treatises on games and books of travel, 3,000. These figures probably represent two-thirds of the entire sales of American books and periodicals in this city. The demand for American books and periodicals is constant but limited; still, an increasing number of Mexicans buy American magazines and technical journals.

MEXICAN LITERARY TASTES.

To present clearly the possibility of a growing demand for American works translated into Spanish in this country involves a digression into the mental attitude of Spanish-Americans generally toward our country as a fountain head of culture. The average Spanish-American taste, in books of fiction, turns naturally to France. Much Spanish modern fiction is read, but the popular taste runs very largely toward the emotional class of French novels translated into Spanish. Of our own classic writers of fiction very little is generally known save perhaps Edgar Allen Poe, and among contemporaneous writers whose works appeal to the fantastic and emotional side of the mind. Occasionally works of thrilling contemporaneous interest have grown popular among Spanish-Americans in translated forms, such as "Uncle Tom's Cabin," and of recent years certain of President Roosevelt's published works. I have no doubt that a great many works of

modern American fiction could be successfully translated and marketed here, but these should be invariably of the emotional kind already alluded to. The habit of reading magazines and periodicals in homes is not at all general, and very little could be done in the way of monthly magazines of translated American fiction. It should be borne in mind by American publishers that few Mexican ladies do any reading, and that for some years to come there will be little demand here for the class of literature which finds its best market among American women.

Viewing the situation broadly it is evident that while Spanish-Americans respect our natural abilities at commerce and such practical applications of science as engineering and dental surgery, they are still very far from regarding the United States as a possible source of culture or art. Our favorite books and plays do not appeal to them, on the score that we are "too phlegmatic," that our art in literature has too little of the impulsive and dramatic to please them.

The great bar, of course, is the language, for almost every advanced young Spanish-American learns to read French from his text-books at college, whereas the possession of English is looked upon as quite a separate accomplishment. This French influence is particularly marked in Mexico where, since Maximilian's reign, the word French has been synonymous with elegance and culture.

SPECIAL AGENT'S REPORT.

NATIVE AUTHORSHIP AN ESSENTIAL FEATURE IN TEXT-BOOKS.

Special Agent Arthur B. Butman, writing from Mexico City, had the following to say on the best way of introducing American text-books in Mexican schools:

The Mexican market for American books and publications in English is a limited one, being almost wholly confined to the English-speaking population. Books in languages foreign to the country, with the exception of certain medical works of German and English origin are limited. Various well-stocked bookshops exist in Mexico City and in other of the larger towns where American and English works, as well as the current magazines of both countries are found on sale.

The principal requisite for the text-book trade is that books shall be written by native Mexican authors. Accordingly, if American houses should put out text-books so produced the market for their publications would be a far larger one than is now the case.

The department of education both of the Federal District and of the various States throughout the Republic, adopt the text-books to be used in the public schools; consequently the market depends upon their adoption by these authorities. This adoption would obviously be much more easily secured by American publishers were the books written by native authors.

A large proportion of the text-books now in use in the Federal District are written by native authors and published in Mexico City. I find the matter of cost is, after authorship, the most important consideration. Superiority of binding or contents will not insure sales of American productions if the price is much in advance of that demanded for Mexican published books. No universal system obtains regarding the ownership of text-books. In some States they

are purchased by the pupil, in others the books are furnished, partially at least, by the State government.

For the purpose of comparison in price the following examples are cited: A child's reader of Mexican publication sells for 20 cents gold; a geography, elementary grade, for 20 cents, and when purchased in any considerable quantity by the Government, a discount of 25 to 30 per cent is allowed from these prices.

An American child's reader sells for 30 to 40 cents, a geography sells for 40 cents, each of corresponding grade. A discount is also allowed by American houses to Government purchasers of text-books.

It should be stated that the American productions are far superior in binding, paper, and material. Nevertheless the question of price is one of greater importance, while paramount is the preference for books by native authors, a preference which is only natural, and so the more readily appreciated.

THE SALE OF FICTION. .

As regards the sale of novels in Mexico, the greater number of Spanish novels—that is, the cheap paper editions—are published in Barcelona, Spain. Owing to the extreme low cost of labor, poor quality of paper used, and the inferiority of binding, the Spanish publishers are enabled to produce these works at an exceptionally low price. Dealers in Spanish America can secure novels from Spain, laid down in their own town, at a price equal to or lower than the actual cost of production in the United States. The Spaniards are able to supply the market at the above low rates, not only for the reasons already mentioned, but owing also to the fact that enormous quantities and varieties of books of this sort are turned out by them. Furthermore, a new work published by a Spanish house need not depend upon its export trade for a market, whereas the American publisher must depend upon markets to be found in foreign countries for a work published in a foreign language.

One of the oldest and best-known American publishing houses is putting forth commendable efforts to introduce text-books containing the most modern pedagogical methods of instruction. The works were written at first hand in Spanish and carefully adapted to the special needs of the Latin-American youth. To show the sincere efforts made on the part of this publishing house it may be noted that the author of a number of modern text-books was educated in various institutions of learning in the United States at its own expense, with the object of securing the most comprehensive and scholarly edition of text-books for Latin-American use.

[Samples of Mexican text-books and Spanish novels sold in Mexico may be seen at the Bureau of Manufacture.]

MONTEREY.

PEOPLE PREFER TO READ AMERICAN AUTHORS IN ORIGINAL LANGUAGE.

Consul-General Philip C. Hanna, of Monterey, reports that newspapers in English are common in that consular district, and that there is demand for American books and magazines:

There is a large and increasing book and magazine trade in this part of Mexico, especially in the latest American books by popular

authors, leading American magazines and daily newspapers. Some of the stores of Monterey keep a large supply of the chief works of the best authors, a large variety of magazines, and daily newspapers from all parts of the United States.

I do not believe that there is any special demand in this part of the country for American publications translated into the Spanish language, since nearly all educated Mexican families are instructed in the English tongue, and as a rule prefer to read these publications in the language in which they were originally written.

Monterey has two daily newspapers owned and published by an American, one in English and one in Spanish. They both have a large circulation, contain Associated Press news, and wield great influence in northern Mexico. Several of the large cities in this consular district have daily newspapers in the English language, and nearly all large towns have one or two weekly papers published in English. When it is taken into consideration that there are thousands of Americans residing in northern Mexico and always a large transient American population, nearly 50,000 in all, it can be understood why publications in the English language are popular and in demand.

TUXPAM.

HOW TO BIND BOOKS IN ORDER TO AVOID PAYING IMPORT DUTY.

Consul A. J. Lespinasse, of Tuxpam, in reporting on the book trade in Mexico emphasizes the need of selling books at low prices. He says:

The condition of the book trade in this country is in a flourishing state. The magazine trade as it exists in the United States is unknown here. There would be a good field for American publications, fiction and nonfiction, and in fact a multitude of other works, if translated into Spanish and offered at low or medium prices. There would also be a moderate demand for the finer grades of artistic binding. In this city there would only be a limited demand for translated American publications owing to its population of only 7,000, not including the suburbs, which are inhabited by the poorer classes.

Mexico undoubtedly offers an exceptionally good field for all works of fiction and nonfiction if translated into Spanish and sold at a low price. Paper, binding, and general workmanship should be of the plainest so as to reduce cost to a minimum. Although plain the general appearance should be attractive. Chivalrous sentiment is a prominent characteristic among all classes in Mexico, and novels of all kinds strongly appeal to their nature if at all worthy of being read, and price is moderate. Many are debarred from this enjoyment, as even the most inferior novels retail at 75 cents to \$1.50 Mexican currency (\$1 Mexican = 50 cents gold). As a rule all works of fiction are received from Spain. Translations from French authors are popular here.

Magazines such as are published in the United States for \$1 to \$3 gold annually, are unknown here, with the exception of a very limited supply received by American residents or a few natives who have been educated abroad and who understand the English language sufficiently well to appreciate this class of publication. Judging from

the popularity enjoyed in Mexico by the few American fashion magazines which are published in Spanish, others containing fiction or historical and illustrated, if also published in Spanish, would meet with general favor.

A number of illustrated magazines are received from France and Spain, but the prices at which they are sold render it impossible for any but the wealthier class to purchase or subscribe. The \$1 magazines if published in Spanish would be a revelation and become popular with all classes.

If printed books and magazines are imported with plain paper covers they are admitted duty free; if the covers are of cardboard, or leather, or cloth binding the duty is 5 cents Mexican per gross kilo (2.2 pounds).

TORREON.

LIBRARIES KEPT UP TO DATE—MARKET FOR BOOKS OF HIGH GRADE.

Consular Agent George C. Carothers, of Torreon, makes the following report on the market for good books in his district:

There is here a very large mail-order magazine and book trade, nearly all the American families sending for their periodicals by mail. There are, also, continuously arriving here agents for book stores in the United States who sell large numbers of books. This is an exceptionally good market for fine works, there being many good libraries belonging to private individuals that are kept up to date. Although hard to estimate, it is safe to say that a number of thousands of dollars are spent yearly in this city for books and magazines published in the United States.

There is quite a call for American publications translated into Spanish, and among both the Mexicans and Americans there is a demand for American publications in English. Most of the educated Mexicans talk and read English.

MATAMOROS.

RIISING GENERATION WILL READ AND SPEAK ENGLISH.

Consul Clarence A. Miller, of Matamoros, sends the following report on the progress made in the speaking of English and reading of English literature in that part of Mexico:

This city, which has 8,000 or 10,000 inhabitants, constitutes practically the entire consular district for business or trade of any kind. The majority of the people are very poor, yet there are here quite a number of persons of means, among whom are government officials, both civil and military. The middle class, consisting of merchants and business men, are educated and interested in the current events of the business and political world.

The children of the poorer classes are being given as good an education as is possible under present conditions. Hence it is that there is a lively trade in books and magazines, with the indications that the demand will increase. As few of these people read or speak English, this trade is almost wholly confined to publications in the Spanish language. They are, however, intensely interested in American affairs and seem to be in sympathy with American methods.

They send their children to schools and colleges in the United States whenever they can afford to do so. A demand could no doubt be created for American publications of fiction and nonfiction if translated into Spanish. The few Americans here secure their magazines and books direct from the publishers, though it is now possible to obtain some books and most of the leading magazines in Brownsville, Tex., which is just across the river.

CIUDAD PORFIRIO DIAZ.

TRANSLATIONS OF AMERICAN BOOKS WOULD FIND A MARKET.

Consul Luther T. Ellsworth, of Ciudad Porfirio Diaz, submits the following relating to the demand for American books in that consular district:

Real "book stores" do not exist in this part of Mexico. There is one dealer in books and magazines in this city, and his trade comes to him without an effort, but it is not extensive. Translated into Spanish, American publications would sell here, but no great trade could be expected with the present condition of no book stores.

In Monterey and Chihuahua Americans have opened book stores and have a good trade in American publications. Eagle Pass, Tex., which is separated from this city by a river only, has a fine trade in American publications. English-reading people residing in this city buy their books there.

CHIHUAHUA.

GOOD MARKET FOR MAGAZINES, TECHNICAL AND TRADE JOURNALS.

Consul Luther T. Ellsworth, writing from Chihuahua, gives the following report, in which he calls attention to the possibility of introducing translations of American fiction:

The stationery houses in this city and the larger cities of this consular district do a considerable trade in all the leading magazines published in the United States, principally among the foreign population, though quite a number of the educated Mexicans who speak the English language take American magazines.

Books are not so generally sold as magazines owing to their high price. There are several American magazines, mostly devoted to technical subjects, or trade, agricultural, and mining, published in Spanish, and these enjoy a wide circulation. No doubt magazines or works of fiction published in Spanish would prove popular among native residents of the better class.

DURANGO.

DAILY PAPERS WILL CREATE DEMAND FOR AMERICAN LITERATURE.

Consul Charles M. Freeman, of Durango, transmits the following report in which he notes the increasing demand for English reading matter:

The condition of the book and magazine trade in Mexico is good and constantly improving. When it is taken into consideration that there are several daily papers published in Mexico which are printed

in English, and that in this consular district a new daily, also in English, commenced publication the first day of the present month, it will be seen that not only is there a demand for reading matter printed in English, but that proprietors of papers who are usually good judges believe that the demand will increase.

In this city the book trade is confined almost wholly to books printed in Spanish. However, the demand for American publications in English is on the increase, magazines being the best sellers. There is also a limited demand here among the educated for translations of the best American authors.

AGUASCALIENTES.

NEWS COMPANY PUSHING INTRODUCTION OF AMERICAN LITERATURE.

Consul W. D. Shaughnessy, of Aguascalientes, makes the following report on recent advances made toward introducing English literature:

The condition of the American book and magazine trade in this district is considered good. There are about 800 Americans residing here who make the trade a success to the dealers, who carry practically all the magazines, and many of the daily and Sunday newspapers published in the United States. Magazines which sell in the United States for 10, 15, and 25 cents, can be bought here for 12½, 17½, and 30 cents gold. One finds also many of the latest and accepted novels which sell at an advance of about 35 cents per volume, the difference being greater than on magazines, owing to the higher rate of duty on bound books.

It is possible that there would be a demand for American publications translated into Spanish, but as a rule the educated classes in the district are not great readers. There has been an increasing demand for school-books for the teaching of English, and one of the prominent news companies of the United States has undertaken the establishment of a library, such as the "Booklovers," which demonstrates its confidence in the demand for American publications.

MAZATLAN.

DEMAND IS FOR LITERATURE IN THE ENGLISH LANGUAGE.

Consul Louis Kaiser, of Mazatlan, transmits the following information relative to the sale of books and magazines in that Mexican consular district:

There is only one good and well-stocked book and stationery store here. It is doing a fair business, rapidly increasing its sales and extending its patronage; especially is this true of books of fiction. Magazines also sell rapidly, even at the great advance in prices made here, as the magazines which are sold at retail in the United States at 10 cents are sold here for 20 to 22½ cents gold.

With the present increase of English-speaking people in this State the sales of American publications in the English language will also increase. There is little or no demand here for American publications translated into Spanish, but a good demand for American publications printed in English.

BRITISH TRADE NOTES.

Consul Frank W. Mahin sends from Nottingham the following items of British industrial and commercial interest:

The British labor market generally is much depressed. The iron and steel industries are in the worst position, and drastic measures are taken in some cases to reduce output.

Nearly 3,000 able-bodied men are reported among the unemployed in Nottingham. Nearly 5,000 people in this city are receiving relief from the poor funds. These numbers are unusually large.

Many schemes are discussed for giving work to the great number of unemployed in this country. One of the most important and useful propositions is to apply the surplus labor on afforestation.

Over a thousand employees of an electrical engineering works at Loughborough, Leicestershire, have been discharged during the last three months, and the weekly wage list has been reduced from \$12,000 to \$7,000.

The hay crop of the Kingdom is estimated at 14,000,000 tons this year, an average of 33 hundredweight (1 hundredweight = 112 pounds) per acre for clover and 29 hundredweight for pasture. This is substantially the average for the past ten years, but slightly below the 1907 yield and average per acre. The quality is good this year.

All the counties in England and Wales have appointed the committees required by the Small-Holdings Act which took effect the first of this year, providing for assignments to applicants of tracts from 1 acre to 50 acres in extent. About 20,000 applications have so far been made in the entire country asking for more than 300,000 acres.

According to present indications (July 20), the oats crop in the ten districts of Lincolnshire and several nearby counties to the southward will be nearly a total failure. Heavy and continued rains, with wind, have flattened the grain and mildew has set in. Barley is also badly damaged, and will probably be poor in quantity and quality. Wheat is the least injured of the cereal crops, but the acreage is relatively small.

Importation of Mowing Machines into Germany.

Vice-Consul James L. A. Burrell, of Magdeburg, quotes the following statistics to show that the importation of mowing machines into Germany is of considerable importance and is steadily increasing:

During the first five months of the present year 150,629 double centners (33,138,380 pounds) valued at 10,000,000 marks (\$2,380,000) were imported, as opposed to 147,129 double centners (32,368,380 pounds) in the corresponding period of 1907.

A large part of the machines imported comes from Canada, which furnished 18,600 double centners (4,092,000 pounds) in the period mentioned, as opposed to 13,492 double centners (2,968,240 pounds) in the corresponding period of 1907. The Canadian machines are admitted into Germany at the same low tariff rate, 4 marks (\$0.95) per double centner (220 pounds), as those from the United States and England, while German goods sent to Canada are subject to an additional tariff.

TRADE OF PALESTINE.

TRADE CHIEFLY CONSISTS IN SUPPLYING TOURISTS AND PILGRIMS.

The following statistics covering the trade and industries of Palestine are taken from the London Economist, furnished to that journal by a Jerusalem correspondent under date of June 8, 1908, who quotes largely from the British consul at that place:

Palestine is a small country and contains no large towns, and its trade chiefly consists in supplying the wants of 6,000 tourists and 18,000 pilgrims, who visit Jerusalem yearly. The consul, in his report for 1907, estimates Jerusalem at 80,000; Yafa, 40,000; Gaza, 35,000; Nazareth, 20,000; Hebron, 10,000.

Nazareth is in Palestine, but its port, Haifa, is not, which is an inconvenient arrangement. The population, too, is almost entirely agricultural, and in Jerusalem many of the Jews live on charity, so there is not as yet very much scope for trade. For 1907 the imports of Yafa were a little over £800,000 (\$3,893,200), the exports something under half a million sterling (\$2,433,250). Gaza, the only other port, imported £60,200 (\$336,762) and exported £0,200 (\$44,772). But the Yafa figures have nearly doubled in the last five years, and there are prospects of considerable elasticity. The consul remarks: "During a recent journey to Gaza I was struck by the fertility of the country. Even along the coast, where the sand dunes driven by the wind are apt to encroach on the land, fertile soil is found at no great depth. In average years the crops of this productive tract, which extends as far as Kan Younis on the Egyptian boundary, allow of an export of barley, chiefly to the United Kingdom, of from £200,000 to £250,000 (\$973,300 to \$1,216,625) in value." As in ancient days, the plain of Sharon is renowned for fertility. The consul says: The increase of population has naturally brought about a considerable augmentation of the imports. One reason for the large increase in the value of trade last year was the rise in the prices of the commodities.

Yafa's largest import is cotton goods—£267,670 (\$1,302,616). Tobacco, hardware, timber, sugar, rice, flour, iron, and petroleum are moderately large items. The backward state of manufactures is shown by machinery only amounting to about £8,000 (\$38,932), but none at all was imported five years ago. As might be expected, oranges lead the exports—£170,185 (\$872,003). Soap is half as much, and sesame rather more than half of soap. Wine amounts to £33,850 (\$164,731). Religious articles come fifth—£23,040 (\$112,124). These are the chief industries of Bethlehem. The tonnage of Yafa is well under a million, but 40 per cent more than in 1903. It is, however, half as great again as the combined trade of Haifa, Acre, and Sidon. Gaza's import figures will probably increase, as a German line is establishing an agency there. Its largest item is £19,000 (\$92,464) in Manchester cotton goods.

In two years a railway will be completed from Haifa, through Nablus to Jerusalem, which will make Haifa an important railway terminus, though it will be necessary to expend a good deal on the excellent natural harbor of that port. Coal is believed to exist near the Dead Sea, and a report is being made of the possibilities it affords. Except for wine, the manufactures of Palestine are practically nil, and it is probable that the people will always continue to depend on agriculture for their livelihood.

Agriculture varies considerably in different parts of the province. One report says: "The primitive methods of agriculture followed in this country are familiar through descriptions of numerous writers; it is difficult to see how they could be greatly developed in the neighborhood of Jerusalem itself on account of the underlying rocks. No improved plow could be used, as the soil is in most cases not deep enough." Indeed, it is most striking to see at the bottom of the Valley of Roses leading up to Jerusalem (although the rocky sides towering up look as if they could inclose nothing but stones and sand, and though there may be little or no water in the wadi) olives and all kinds of fruit trees and tiny cornfields flourish luxuriantly in the little deposits of rich soil. The consul adds: "Quite different is the rich plain of Sharon. Here water is generally to be found at no great depth; the soil is fertile, and with the extension of improved methods of cultivation (which are already being employed in the German and Jewish colonies), the production might be greatly increased. Wells are sunk, and the water is now generally raised by water engines, mostly petroleum. Upward of 500 such motors are now in use in the Yafa district."

SPAIN'S FOREIGN COMMERCE.

FIRST FIVE MONTHS OF THIS YEAR SHOWS GENERAL INCREASE.

The following statistics furnished by Consul-General Frank D. Hill, of Barcelona, show the amount of foreign trade of Spain during the first five months of the last three calendar years:

	1906.	1907.	1908.
Imports.....	\$72,667,241	\$67,882,758	\$70,117,241
Exports.....	68,317,241	63,222,414	68,827,586
Total.....	135,984,482	131,205,172	138,944,827

Deducting therefrom the amount of precious metals, the imports and exports, classified under the different headings into which they are divided, amounted to the following:

	Imports.			Exports.		
	1906.	1907.	1908.	1906.	1907.	1908.
Raw materials.....	\$29,658,621	\$35,124,138	\$35,639,655	\$25,872,413	\$27,081,034	\$23,367,241
Manufacture, articles of	20,944,837	19,824,138	23,906,897	16,900,348	15,251,724	19,800,000
Food products.....	21,684,489	12,591,827	10,289,656	20,467,241	20,891,879	24,418,966
Total.....	72,287,981	67,643,108	69,836,207	62,860,002	62,674,187	67,086,206

PACKING FOR COLOMBIA.

GOODS FOR THE INTERIOR SUBJECTED TO HEAT AND MOISTURE.

Consul-General Jay White, of Bogota, furnishes the following information concerning the proper packing of goods destined for interior Colombia:

Until transportation facilities are much changed and improved, all perishable goods destined for the interior of this country should be so packed as to exclude moisture and in bundles not exceeding 125 pounds in weight, for convenient transportation on mule back, by peon, or in canoes.

Merchandise that is transported via the Magdalena River is subject to at least 100° F. for a period of about ten days, and articles such as photographic films, pharmaceutical preparations, etc., are often ruined through insufficient or negligent packing. Goods destined for the interior are exposed to the downpour of tropical rains, and may, accidentally, be submerged in crossing a stream, or in careless handling in canoes. Merchandise may now be forwarded from the Magdalena River to Bogota via the Cambao cart road, but even by this route there is no assurance that it will not be damaged by water.

Crop Production in Cape Colony.

From figures of crop returns collected by the Government, South Africa, a London publication, quotes the following summary of the values of Cape Colony production in the year 1907: Crops, \$7,213,939; vineyards, \$1,313,142; animal products, \$41,752,233; other products, \$4,866,000; fruit, \$378,127, a total of \$54,210,299. The value of the live stock in the Colony (figures for 1904, with estimates for natural increases) was \$127,804,023.

BRITISH MINERS' BILL.

NEW LAW GOING THROUGH PARLIAMENT REDUCING LABOR HOURS.

Consul Albert Halstead, of Birmingham, reports that the British House of Commons has passed the second reading of the miners' eight-hour bill, on which he comments:

This being a Government measure, its enactment into law seems certain. The bill is to become operative in five years after its passage and the eight hours maximum provided for a day's work below ground in the mines includes going to and from work.

The proposition to limit the employment of miners below ground to eight hours has been discussed in Parliament for about 20 years and advocated and opposed with great vigor, miners supporting it energetically, while chambers of commerce and most mine owners were antagonistic. Apprehension has been indicated that it would result in reduction of the output of coal and the increase of its price to the serious interference with industry and the greater expense to householders, particularly to working men. On the other hand, it has been argued that it will remove the temptation for miners to absent themselves from work as much as they have in the past, that the output will ultimately increase through better work and through more men being employed working in several shifts.

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MACHINES AND TOOLS.

FRANCE.

A LEADING FRENCH PLANT—WORK DONE AND TOOLS USED.

In the following report, dated Le Creusot, June 23, Special Agent Capt. Godfrey L. Carden describes a visit made to one of the foremost machine plants of France:

The name "Le Creusot" is to France what "Essen" is to Germany. In the latter place Krupp holds sway. At Le Creusot it is Schneider & Cie. The total number of men carried on the pay rolls of Schneider & Cie. approximate 20,000. Of this number 12,000 are in the Le Creusot shops. The remaining 8,000 are scattered among the subsidiary plants at Chalon-sur-Saone, Havre, Champagne-sur-Seine, Decize, Espagne, Mazenay, Creot et Change, Montchanin et Longpendu, and Perreuil. The shops at Le Creusot cover 2,400 acres. Fancy a small pocket in a low range of hills, jammed with furnaces and machine shops, with a canal winding through in and out to the plains beyond, with houses and streets stretching up the hillsides and struggling to reach above the line of smoke, and one sees Le Creusot. It recalls the Allegheny country, the landscape, the industries, and all the accompaniments of a great steel and iron section being similar here to our Pittsburg territory. It may be said that from Le Creusot to St. Etienne iron and steel are the great products. The industries of this great Le Creusot-St. Etienne district are, next to the steel interests in the east of France, the most important in the iron and steel line in all France. The Creusot Works are not a machine tool house, but I have felt that no report on French industrialism would be complete without reference to them, and I am indebted to Messrs. Schneider & Cie. for courtesies and attention afforded.

ORIGIN AND DEVELOPMENT OF THE WORKS.

An English engineer originally founded the Creusot Works in 1782, and Louis XVI was interested in the plant. It was known then as the "Royal Foundry." From 1793 to 1814 Le Creusot was utilized almost wholly for the manufacture of cannon. In 1826 the plant was sold to an English company known as "Société Mandy-Wilson et Cie." In 1828 there was formed a new company known as "Société Anonyme des Mines, Forges et Fonderies du Creusot et de Charenton." From these numerous changes it may be gathered that business conditions in France following the Napoleonic era were not the

best. In 1836 J. Eugene Schneider and his brother Adolphe purchased the Creusot works and two years later they built the first locomotive constructed in France. Eugene Schneider may really be called the founder of the present establishment. From all accounts he was a wonderful man intellectually and in his ability to control men. Later in years he was president of the French Legislature, and lived a most active and eventful life until almost the year of his death, which occurred in 1875. Henri Schneider, son of the founder, became associated with his father in 1867, and later took over the active control of the plant. During his lifetime many of the most important of Le Creusot developments were inaugurated. Like his father, Henri Schneider took an active part in politics, and was a member of the Chamber of Deputies. His death occurred in 1898. The present head of the works is Eugene Schneider, son of M. Henri Schneider, and grandson of the founder. He has been actively identified with the administration of Le Creusot affairs since 1896.

Schneider & Cie., I am told, own about 14,000 workmen's houses, with gardens attached. Liberal provision is made by the company in the way of annual pensions and endowment funds for services. A staff of eight doctors is maintained, and there is a hospital with a fund of 2,000,000 francs (\$386,000). Schneider & Cie. pay about 2,500,000 francs annually in the interest of the workmen. The administration of affairs is divided between Paris and the foundry offices.

VARIETY OF THE OUTPUT.

Le Creusot first came into existence as a mining locality, and a mine is still worked within the Schneider property here, but it only produces now about 50,000 tons of coal per year, whereas the Schneider works require about 550,000 tons yearly. In consequence additional coal is drawn from the company's collieries at Decize and Montchanin. These two collieries supply about 200,000 tons of coal. Originally started as a foundry, Le Creusot has developed until to-day there is an annual output of 140,000 tons of iron, 155,000 tons of Martin and Bessemer steel, 150,000 tons of finished laminated steel and iron, the various outputs comprising iron and steel billets, rails and various railway materials, steel-construction work, ship plates, locomotives at the rate of five per month, artillery of all calibers, armor plate at the rate of about 5,000 tons per year, equipments for ship batteries, electrical materials, steam engines, turbines and gas engines, railway wheels and axles, castings of all sizes, and at the Chalon-sur-Saone plant torpedo boats are built. It was at this last plant that the material was turned out for the beautiful Alexander III bridge, of Paris, and the bridges over the Rhone and Danube bearing this company's name. Bridges have been sent out from Chalon-sur-Saone to Chile, Tonkin, and other far away parts of the world, Le Creusot also builds turbine engines of the Zoelly type.

CONSTRUCTION OF LOCOMOTIVES—TOOLS USED.

At Le Creusot it was my good fortune to meet M. Rais, the commercial manager, and M. Panier, the chief of the artillery commercial department, and from these gentlemen every facility to inspect the works was afforded. The locomotive shops were very busy, and it

is my understanding that the reason for so many French locomotive orders going abroad during the past year is due to the inability of the home shops to meet the demand. In the locomotive department the American machine tools are comprised of the following: One Niles planer, 1 Fosdick radial drill, 2 Brown & Sharpe tools, 1 Gisholt turret lathe, and 2 Bullard tools.

The foreign makers were represented by the following: Fetu-Defize, Liege, horizontal borers; Ducommun, Mulhouse, drills and turret lathes; Longdz, Liege, planers and drills; Ateliers Demoor, Brussels, lathe; Bouhey, Paris, lathes and milling machines; Smith & Coventry, Manchester, lathes; Duval-Pichet, Paris, milling machines.

Although there are some milling machines in this department, I observed relatively very little milling work here. In the shaft department were found heavy boring tools from J. Whitworth & Co., Manchester, England. All these were motor driven. Thomas Shanks & Co., also an English firm, were represented in this department through horizontal boring mills. I notice that Bouhey, of Paris, had supplied a very large boring mill. Ducommun was represented here, as were also Elwell & Seyriz, of Paris. In the boiler department all plate-drilling work was being performed with Bouhey and Ducommun machines. The drilling on all boiler heads was being done with jigs using multiple drills. In the marine department heavy Ducommun and Société Alsacienne tools were being used for planing. Schneider & Cie. have themselves manufactured a number of very heavy tools for use on turbine and ship-engine work, among others a boring mill of 10 meters diameter, weighing 70 tons. In the marine department American machine tools are in service from the Gleeson Works, Bullard, Boush, Brown & Sharpe, "Acme," and the National-Acme Manufacturing Company. The engines for the new French war ship Edgar Quinet are building at Le Creusot, comprising three engines of 12,000 horsepower each. One of these was practically complete on June 23, when I visited the works. Some of the casting work in Le Creusot shops is as fine as any I have seen in Europe. This is a branch of business in which Schneider & Cie. can well lay claim to the highest merit.

I was informed that Le Creusot has enough work ahead in some departments to last two years, and I assume that this has largely to do with the artillery and locomotive orders. My views on this subject have been confirmed on further reference to Messrs. Schneider & Cie. In the field-gun department American tools come somewhat more into evidence, but I am compelled to say that our American tools are not represented in this great plant to the extent which one would expect to find.

AMERICAN AND OTHER FOREIGN TOOLS.

The American tools found in service, in addition to those previously mentioned in other departments, comprise the following:

Brown & Sharpe, Providence, R. I., vertical millers; Pratt & Whitney, Hartford, Conn., lathes; Norton Grinding Company, Worcester, Mass., grinders; Fosdick Machine Tools Company, Cincinnati, Ohio, boring machines; Niles Tool Works, Hamilton, Ohio, planers and drills; W. F. & J. Barnes Company, Rockford, Ill., drills; Hendy Machine Company, Torrington, Conn., shapers;

Defiance Machine Works, Defiance, Ohio, planers; Gisholt Machine Company, Madison, Wis., five turret lathes; Potter & Johnson, Pawtucket, R. I., automatic turret turning and chucking machines to the number of about 20; National-Acme Manufacturing Company, Cleveland, Ohio, threaders.

The foreign makers in the gun department were represented by the following:

John Lang & Sons, Johnstone, Scotland, borers; Barriquand & Marre, Paris, millers; H. Ernault, Paris, vertical millers; Bouhey, Paris, horizontal borers, vertical drills, and slotters; J. E. Rheinecker, Chemnitz, vertical millers; George Richards & Co., Broadheath, England, horizontal borers; Schultz, Mulhouse, shapers; "Grafenstaden," lathes; Wanderer Works, Chemnitz, millers.

I am informed that there will soon be installed in this department an Armstrong tool of 220 tons weight, capable of swinging a length of 17.530 meters and a diameter of 2.300 meters.

With the exception of a Pratt & Whitney lathe practically all the lathes in the principal machine-tool department are from either Ernault or Grafenstaden. The shops popularly referred to as "Grafenstaden," are a branch of the works known as "Societe Alsacienne de Constructions Mecaniques," Mulhouse. This firm was originally French, that is, until 1870. One branch of the establishment is located in Belfort, French territory, and although the parent house is now in Germany, I am inclined to think that many houses still look upon the Mulhouse shops as French.

In the locomotive department I did not observe any oxygen gas-cutting appliances or presses for stamping out plates. All plate cutting was done by punching. Only plate-frame form of construction on locomotives was in progress. The finish on these French locomotives is of high order.

A WELL-EQUIPPED PLANT.

In the armor plate department some beautiful tools from Ernst Schiess, of Dusseldorf, were observed. There were four in all, and they are as fine tools of the type as I have ever seen in any installation. In 1900 there was a heavy strike at the Schneider works, and in all about 10,000 men walked out. The strike, which continued about a month, came without warning of any kind and apparently without reason. It seems to have been dictated through a general sympathy with a movement of unrest which existed that year. It will be recalled that in 1900 the Socialists were especially active.

Le Creusot impresses one as being an extraordinarily fine plant. The steel made there is largely on the Martin's process. Ore comes from the company's mines in eastern France, from Algiers, and from Spain. The richest minerals come from the Pyrenees. While Le Creusot is almost in the east center of France it is accessible by canal, both from the Mediterranean and from the English Channel. Torpedo boats and destroyers have been built at the Schneider works at Chalon-sur-Soane and conveyed thence to the Mediterranean.

As heretofore remarked, American machine tools are not much in evidence at Le Creusot, and it would seem that the question of price has cut some figure, for my attention has been called to the freight rates, commissions, and duties imposed. This is a matter calling for some attention, as foreign-made tools can often be undersold to advantage by American makes. The best single installation here is, I think, from Schiess. These are machines for armor-plate work and

probably constitute the same aggregation which an American firm negotiated for.

It is impossible to exaggerate the importance of Le Creusot, for this is certainly the most important plant of its kind in all France. The highest intelligence marks the direction of the various departments, and taken all in all the establishment is one of which Frenchmen are rightly proud. There is no work here in armor plate or castings of any kind too large for Le Creusot to handle, and from the standpoint of the gigantic, the Creusot shops can produce sizes the equal of any other plant known to the writer in Europe.

Le Creusot is working on a ten-hour schedule, commencing at 6.30 a. m. and continuing until 11.30, with a noon shut down from that hour until 1 p. m., the day terminating at 6 p. m. The cost of wages is tending steadily upward, and living is not deemed cheap. Rentals, however, are cheap.

A PARIS CONCERN.

FOREIGN TOOLS USED—FEMALE OPERATORS.

Special Agent Capt. Godfrey L. Carden describes a visit to a large machine plant at Paris, Puteaux, as follows:

The De Dion-Boutin & Cie. works are employing at present about 2,700 men in all departments. The outputs are confined largely to automobiles, and the engines manufactured comprise 8, 12, 18, and 30 horsepower machines. The 12, 18, and 30 horsepower engines have 4 cylinders, while the 8 horsepower has 2 cylinders. Firms like De Dion-Boutin & Cie. have been heavy purchasers of foreign-made machine tools, and the fact that so much equipment had to be purchased abroad was doubtless the underlying cause for the interest which the Marquis de Dion has taken in the new French machine tool-house known as "Société Française de Machines-Outils." In a previous report I mentioned that the Marquis de Dion proposed in the course of a speech following a banquet at the automobile exposition in 1906, that his friends unite with him in building in France a special machine-tool works for supplying the automobile industry. The new French machine-tool works known as Société Française de Machines-Outils is now engaged in building machine tools for the French trade, on which a special report was made.

FOREIGN TOOLS IN USE.

The machine-tool installation at the works of De Dion-Boutin & Cie. is a very fine one, especially that part comprising the medium-sized tools which were purchased for the newer shops. Among the American makes of tools in service I observed the following:

Bullard Machine Tool Company, Bridgeport, Conn., boring mills; Prentice Bros., Worcester, Mass., drills; Gisholt Machine Company, Madison, Wis., turret lathes; Potter & Johnston Machine Company, Pawtucket, R. I., automatic turret-turning and chucking machines; H. G. Fish Machine Tool Company, Worcester, Mass., lathes; Hurlbut-Rogers Machine Company, South Sunbury, Mass., cutting-off machines; Pratt & Whitney, Hartford, Conn., automatic turret lathes and cutting-off machines; Brown & Sharpe, Providence, R. I., millers and grinders; Landis Tool Company, Waynesboro, Pa., grinders; Fitchburg Machine Works, Fitchburg, Mass., lathes; the Hendey Machine Company, Torrington, Conn., planers; Mark Flather Planer Company, Nashua, N. H., shapers; the Waltham Watch Tool Company, Springfield, Mass., plain milling ma-

chine; Kempsmith Machine Tool Company, Milwaukee, Wis., millers; Warner & Swasey, Cleveland, Ohio, hexagonal turret lathes; W. F. & J. Barnes Company, Rockford, Ill., drills; B. F. Barnes Company, Rockford, Ill., drills; Cincinnati Machine Tool Company, Cincinnati, Ohio, drills; Aurora Tool Works, Aurora, Ind., upright drills; Watson-Stillman Company, New York, steam hammer; National-Acme Manufacturing Company, Cleveland, Ohio, multiple spindle automatic screw machines; Foote-Burt Company, Cleveland, Ohio, reliance bolt cutters and nut tappers; Bickford Drill and Tool Company, Cincinnati, Ohio, drills; Gleason Works, Rochester, N. Y., gear cutters; Hartford Machine Screw Company, Hartford, Conn., screw machines; Draper Machine Tool Company, Worcester, Mass., lathes; Davis & Egan Company, Cincinnati, Ohio, boring mill.

The foreign makers were represented by the following machine-tool houses:

Maschinenfabrik Oerlikon, Zurich, vertical boring mills; Dean, Smith & Grace (Limited), Coventry, England, turret lathes; Alfred Herbert (Limited), Coventry, England, turret lathes; H. Ernault, Paris, lathes; Smith & Coventry, Manchester, England, threaders; J. E. Rheinecker, Chemnitz, millers and grinders; R. Huré, Paris, lathes; Fred. Schultz, Mulhouse, lathes; Sächs. Werkzeugmaschinenfabrik, Chemnitz, drills; Wilhelm, Kollmann, Barmen, Germany, lathes; G. Birch & Co., Manchester, England, slotters; Aux Forges de Vulcain, St. Denis, France, vertical boring mills; Th. Prieur, Paris, vertical boring mills and slotters; Webster & Bennett, Coventry, England, automatic profile milling machines; J. Parkinson & Son, Shipley, England, plain millers; E. P. H. Bouhey, Paris, millers; Pillet, ———, France, millers; Lubin & Weiffenbach, Clichy, France, piercing or boring machine; H. W. Ward & Co., Birmingham, England, grinders; "Ducommun," Mulhouse, planer; George Richards & Co., Broadhead, England, lathes; H. Glaenger and Perréaud, Paris agents, multiple drills of German make supplied in the name of this firm; Leipziger Werkzeugmaschinenfabrik, Leipzig, lathes; Biernatzki & Co., Chemnitz, millers; Luke & Spencer, Manchester, England, grinders.

FEMALE OPERATORS.

I estimate that there are about 40 Draper lathes in service. Lathe hands receive at the De Dion works wages ranging from 85 centimes to 1 franc (19 cents) per hour. This is on engine lathes. On the Alfred Herbert turret lathe the wages run from 85 centimes to 95 centimes per hour. I counted 12 Bullard boring mills and 9 Potter & Johnston machines at work. The Mark Flather Company has 4 shapers in service, and the Aurora Tool Works the same number of upright drills. Brown & Sharps have supplied about 11 millers, and I find that Dion & Cie. are employing women operatives with these machines. One woman was caring for 4 millers and was receiving, I was informed, about 70 centimes per hour. I also found women operatives running Gleason gear cutters, one of whom I was told had worked at these machines for four years steadily, with the exception of four months' absence as the result of injury. The women operatives are receiving 70 centimes per hour. Seven women were found at work running millers and gear cutters. It is the first time I have found women intrusted with the high-grade machines.

GRADE OF WORK.

The business at the De Dion works is fairly good, though, in common with other automobile establishments, this firm has been experiencing a considerable falling off in the orders of the last year. The grade of work turned out from the De Dion shops is of high order and the equipment is sufficient for an output equal, I should say, to that of any other automobile house in France. Practically all the

material used in automobile construction is of French origin, and only such foreign tools are purchased as can not readily be obtained in France. In this respect attention is invited to previous reports in which it has been emphasized that the future of the American machine tool in Europe rests largely with the medium-sized machines possessing exceptionally good features. Some of the machines now being turned out by French machine-tool houses possess more than ordinary merit, and it is only natural to expect, in a country where the national spirit is strongly developed, that foreign tools will only be called upon as a last resort. At the De Dion-Boutin & Cie. works there are in all about 1,575 tools in service. The greater part of the American machine tools used were purchased during the past three years.

BRITISH CROP PROSPECTS.

CONDITION OF THE VARIOUS CEREAL AND ROOT PLANTINGS.

The following statistics furnished by Consul Joseph G. Stephens, of Plymouth, under date of July 15, show the condition of wheat, barley, and oats in Great Britain, as compared with last year, the number 100 being taken to represent a healthy crop with average growth and development:

Countries.	Wheat.		Barley.		Oats.	
	1908.	1907.	1908.	1907.	1908.	1907.
England	87.7	92.75	85.6	90.5	83.6	94.6
Wales	85.5	89.6	87.2	89.0	87.2	93.4
Scotland	93.5	95.0	92.8	90.1	93.6	90.3
Great Britain	87.92	92.44	86.55	89.8	86.93	92.8

The probabilities are against an abundant corn crop. Wheat is reported some 6 per cent lower than last year. The barley crop is likely to be deficient, owing to the poor prospects in the eastern counties, which are the principal producing districts. Oats in England are 11 points below the record year of 1907, the important eastern counties indicating a prospective deficiency of 15 points. The higher average in Scotland, as well as in the north and northwest counties of England, assists to pull up the general average to 6 points below last year.

In the following table the bean, potato, and root crops are covered:

Countries.	Beans.		Potatoes.		Roots.	
	1908.	1907.	1908.	1907.	1908.	1907.
England	88.5	94.7	88.3	88.9	82.8	87.7
Wales	88.7	97.0	92.4	82.2	86.0	83.3
Scotland	93.7	94.7	96.8	96.6	93.6	91.8
Great Britain	88.6	96.1	91.62	89.2	85.6	84.2

Beans are deficient this season, peas irregular, but potatoes are better than for some years past. Root crops are 5 points below last year. There is a bountiful crop of hay, the general average working out at 93.9, compared with 81.3 at this time last year.

CANADIAN ELECTRICAL POWER.

COMPETITION OF PROVINCIAL GOVERNMENT WITH LOCAL COMPANIES.

Consul James M. Shepard writing from Hamilton gives further particulars concerning the proposition of the provincial government of Ontario to furnish electric power from Niagara Falls to the municipalities of that Province, within a circuit of 150 miles, concerning which he says:

The government commission, composed of two members of the cabinet of the Ontario government, has charge of this department and has given it careful study and attention. The commission has in its service expert electricians, who have spent a year or more in figuring out the possible cost to the municipalities as their share for the construction of the power line from Niagara Falls to the several points of delivery. This cost is to be shared pro rata between the municipalities entering into the scheme. It is proposed to furnish the electric energy to the municipalities at the price for which the government contracts it from the supplying company at the Falls, to which is to be added the necessary expenses for maintaining the line and keeping it in working order. An extra charge is to be added for the construction of the line, which will continue to be a fixed charge for thirty years. At the end of that period the transmission line becomes the joint property of the municipalities, who will thereafter pay all necessary costs for upkeep and management, as well as for the electric power furnished, the government retiring from further control in the matter.

This is an attractive theory for those who favor municipal ownership of public utilities; but after figuring upon the cost of power and the construction and maintenance of the line the government experts have not, thus far, been able to give a definite statement of what the cost per horsepower will be to the municipalities. The expectation of the government commission is that it will be so low that the expense to manufacturers will be less than that of steam power, there being no coal supply in Ontario.

SITUATION IN HAMILTON.

Hamilton is the first important point at which power would be furnished by the government, and the lowest estimate per horsepower, delivered here, is \$17.80. The cost would increase to other municipalities in proportion to distance from the source of supply and the expense of construction and upkeep of the transmission line. The government contract proposes to bind the municipalities for a period of thirty years not to contract with any private company or corporation for a supply of electric power.

In the city of Hamilton there is a corporation which began in a small way many years ago to furnish electricity derived from its steam plants for street lighting and for the street railway system. Less than ten years ago this company utilized the water power at Decew Falls, 34 miles from Hamilton, constructing a power house, machinery, buildings, and a pole line to this city for the transmission of electrical energy. Contracts were made with the manufacturing

establishments to furnish them power at a price far below the cost of steam power, and now there are very few factories, and those only small affairs, that are not run by electricity. Natural gas, with which this city is supplied, furnishes a cheap power to small users.

CONTRACT RENEWALS AND EXTENSIONS.

The city of Hamilton is now proposing to install electric power to operate the waterworks system and the sewage disposal plants instead of steam, and to that end a by-law was passed by the city council on July 17 authorizing a contract to be made with the local company for power at the rate of \$16 per horsepower. An effort was made by the advocates of the government power system to contract with the government, but as the government could not yet make even an approximate offer at what price electric energy would be furnished, the city council accepted the proposition of the local company.

As the contract for street lighting will shortly expire, this question was also settled by by-law. The city has been paying \$80 a year per lamp for all-night service during the entire year for 460 lamps. Under the new contract the city will be supplied with light at \$47.50 per lamp of 2,000 candlepower, and the number of lamps will be largely increased.

These contracts are made binding for periods of five years, the city having the power of renewal at the end of each five years for twenty years by giving the company due notice. The city can abrogate the contract at the end of any five years, while the company may be held for the full period. In the contracts the city has provided for ample protection to the private users of incandescent lighting and to the manufacturers, so that the company can not take advantage of them and raise their rates. It is probable that the city council could not have made such favorable contracts had it not been for the prospective construction of the government transmission line from Niagara Falls.

EXTENSIVE MANUFACTURING—MACHINERY NEEDED.

Hamilton is substantially a manufacturing city, having now nearly 300 large manufacturing establishments, largely built up during the past eight years as the result of cheap power. They are mainly controlled by American capital, induced to locate here by reason of cheap power, and are managed by American experts. About \$35,000,000 capital is employed, furnishing labor to over 10,000 men and women in the factories.

The bonded debt of the local power company is held by capitalists in the United States. The city council and the company are negotiating for a rebuilding and equipping of the street-car lines, increasing the mileage, and the purchase of new cars. To enable the company to undertake the cost at this time the city has agreed to guarantee the bonds of the company to the amount of \$500,000. The contract is that the company shall provide 50 new cars of up-to-date construction, one-half of that number to be double trucks.

The new equipments of waterworks pumps and motors and new cars and rails for the street railroad should interest American companies.

CORN GROWING IN RUSSIA.

PLANTED OVER A LARGE AREA—USED FOR FOOD AND FOR FODDER.

Consul John H. Grout, of Odessa, gives the following account of the growing of corn in Russia and its exportation:

Maize is grown for its grain in Caucasia and in south Russia up to about 48° or 50° of latitude, and also in Central Asia. In the vicinity of Odessa, as well as somewhat farther north, and occasionally in the Baltic provinces, it is cultivated as a fodder plant. The green plant here in the south is credited with having deleterious effects upon animals fed with it. In some parts of southern Russia, like Bessarabia in the west and Caucasia in the east, maize is grown not only for local consumption, but for exportation, finding its way into the world's markets from Bessarabia by way of Galatz and Odessa, and from the Caucasus by way of Novorosisk and Poți.

The annual maize crops vary considerably as to quantity and quality. Exports of maize from this district vary from about 30,000 to over 100,000 tons, about 1,500,000 acres being under cultivation in European Russia. In Bessarabia as much as 25 per cent of the arable land is used for the cultivation of maize as an article of food. They boil the not fully matured ears, which they salt and eat hot. The people also mix maize flour with other flour for making bread and a kind of stout porridge called "mamalyga," which forms the staple food of these Moldavians. The inhabitants of southern Russia also like to eat the seed off the half ripe boiled ears, but most of them have a dislike for maize porridge or bread with an admixture of maize flour, which they consider as indigestible and injurious. The grain of maize is used to fatten hogs and poultry. Various kinds of maize are cultivated; nearly all kinds of American varieties are known here. A yellow and somewhat nondescript variety of roundish kernel predominates, and is known as Roumanian maize. In good years, when the ears are large and well filled, the seed is laterally compressed, not much different from the "Dent" variety, except that the top remains smooth and rounded off outward. Little or almost no maize appears to be used in Russia industrially.

CLIMATIC CONDITIONS.

All sections of Russia where maize is grown, with the exception of a narrow belt of Caucasia, where it fringes upon the Black Sea, have a strictly continental climate. The winters are apt to be very cold and the short summers extremely hot and dry. The annual rainfall ranges from 10 to 18 inches. The difficulty in agriculture here is not so much in the absence of moisture, but in the fact that the rainfall does not occur when it is most needed. As a consequence, that plant is most valuable which possesses the greatest vitality to tide over a long period of drought. The maize grown here possesses this characteristic, possibly evolved by long-continued natural selection. It often occurs that just the year when all other cereals give poor crops, maize turns out well. This is always the case when, after a long drought in the early part of the season, abundant rains falls too late for wheat, barley, or rye, although still in time to save the maize. Such was the case in 1907.

The soil in most parts of southern Russia is extremely well adapted to all kinds of agriculture. It is undulating ground of fine-grained

alluvial earth free from stones. The cultivators rely upon the natural fertility of the soil, aiding the same only in rare cases with stable manure. Artificial fertilizers are rarely employed outside of sugar-beet plantations.

Maize planting is done quite as often by hand as by drilling. Cultivation is effected by hand labor or by plowing between plants, and often, owing to the weed-grown condition of the fields, by both. In a similar manner harvesting is done on the smaller farms by manual labor, while upon large estates machinery is employed. The probability is that, as the valuable qualities of maize become known and understood by the Russian peasants, and its employment in industries opens a more profitable sale locally, the area devoted to maize cultivation will extend.

BRITISH HONEY PRODUCTION.

ACTIVE CORNWALL INDUSTRY AFFORDS OPENING FOR APIARY SUPPLIES.

Reporting from Plymouth, Consul Joseph G. Stephens says that during the past three years a great advance has been made in honey production concerning which he writes:

The best honey-producing county in England, Cornwall, was the first to engage the service of an expert in bee keeping. The result of this supervision and experiment has worked a vast commercial benefit to the Duchy. Three years ago "foul brood," an infectious disease among bees, attacked the apiaries of Cornwall and worked great destruction. Had it not been for the forced destruction of hundreds of hives there would have been an end to the industry. There now remain but a few traces of the disease.

With the view of making bee keeping a wide and thriving industry, the authorities have instructed their expert inspector to visit all bee keepers in the county, examine the hives kept by them, and to give advice as to their condition and management. It is also the duty of the inspector to work up markets for the product in all parts of the country. Experiments are being carried on at the experimental apiary at St. Erth in connection with the perfecting of fruit and seeds for honey and the production and breeding of queen bees.

This year so far has been a record one for the production of honey and no part of England possesses better advantages in this respect than Cornwall, owing to the extensive tracts of heath and clover flowers. There is a very marked increase in the number of people engaged in this business and scores of people are making as much as \$500 a year from their bees.

Now that the public are so interested in bee keeping is a favorable time for American merchants to introduce into this district the modern bee hives and bee-keeping appliances. Thousands of old-fashioned straw skips must be replaced by wooden hives. There is also room for many other improvements in the methods now being employed. The people are being educated along these lines by able officials interested in the industry and would be disposed to purchase the best appliances obtainable. American manufacturers interested should communicate with a dealer whose name is forwarded [and obtainable from the Bureau of Manufactures].

SPANISH CROP PROSPECTS.**WINE AND OLIVE OVERPRODUCTION—SHORTAGE OF ALMONDS.**

Louis J. Agostini, consular agent at Tarragona, reports to Consul-General Frank D. Hill, at Barceleona, under date of July 14, as follows, concerning the outlook for wine, olive, and nut crops in his Spanish district:

The prospects are that the output of wines will be so great during the coming vintage as to fill the growers with fear as to the possible outlet for their products. In fact, the vats are still full with most of last year's wines, which have not found an easy sale because of their large quantities and the stock from the preceding year. This crisis was but slightly alleviated by the suppression of the excise duty for home consumption in all the principal towns in the country. These circumstances are still more aggravated by the opposition that Spanish wines have to face from those of all other wine-producing countries on the Mediterranean, reports from which announce an ever-increasing output.

The olive oil presses have been kept fully busy during the winter and spring seasons producing that article, the stock of which seems, as in the case of wines, to exceed all possible demand; it being still premature to foretell what the prospects are for next crop, which does not begin until the month of November and lasts until February. The exportation during the current year has been very small, and it is feared that the abundant crops in Italy and Greece will deprive Spanish exporters of the market in the former country, the best outlet for their oils, which Italy imports to clarify and reexport under her own brands.

Almonds, the most important article of exportation considered from the point of view of value, will fall far short of last year's importance of production, which finds its essential explanation in the fact that in the three years' cycle of progressive production of this tree, last year was the third or most abundant, the current year being the one beginning the new series. Besides this, the chilly fog banks wafted in from the sea settled on the trees in the lower country nipping buds and blossoms in early spring, the mountainous parts escaping from a similar fate through the breezes, which, almost constantly blowing, dry up and remove the hoar frost from the branches ere it can do much damage. The forecast is for about one-half of a usual crop.

The hazel or filbert, being a more sturdy and hardier plant than the almond, has had no difficulty in braving the weather vicissitudes. The prospects are for an abundant crop of average good quality.

Only the foregoing products of the soil are exported to the United States, and only a few in insignificant quantities to other countries.

British Chamber of Commerce at Barcelona.

Consul-General Frank D. Hill, of Barcelona, advises that a British Chamber of Commerce for Spain has recently been established, the seat of which is located at Barcelona for a period of four years. At the first meeting delegates from London, Liverpool, Madrid, Cartagena, Almeria, and Reus, and an important element of the British colony at Barcelona, were present.

FRENCH DAIRY CONGRESS.

RECOMMENDATIONS OF THE RECENT MILK INDUSTRY CONVENTION.

Consul D. I. Murphy reports that a Bordeaux newspaper publishes an account of the proceedings of the Third Congress of the Milk Industry, held recently at Paris, concerning which he writes:

As the recommendations adopted seem to have attracted considerable attention in the milk, butter, and cheese industries in this part of France, I give herewith a translation of principal recommendations, as follows:

Milk.—(1) In all business transactions in which milk for human consumption is concerned, purchases should be effected only according to the richness of the milk in its several extractive principles and not according to volume. (2) In the actual state of things and with due regard to scientific precision, "good milk" is "the integral product, unadulterated and unchanged, of the total and uninterrupted milking of a milch-cow in good condition, well fed and not over worked." (3) The definition of "pure milk" to be as follows: "Milk having a distinctly determined origin, not having undergone any alteration, subtraction, or mixture that might change or modify its essential properties." (4) The average composition of each season be established every year by milk districts under the direction of the minister of agriculture.

Butter.—"Genuine butter" (pure in the ordinary sense of the word) is defined as "the mixture of glycerines (fatty matters) which are obtained by the churning of pure milk or of the cream extracted from pure milk, acidified by lactic ferments."

Cheese.—"Pure cheese" is the product obtained by coagulation, by pressure or by lactic fermentation, of the caseine of milk mixed with a variable quantity of fatty matter extracted from milk exclusively.

Eggs.—"Fresh eggs" are only those which by "mirage" (or looking through) show no loss of water and no trace of decomposition.

Extensive Shipment of Cuban Pineapples to American Ports.

Consul-General James L. Rodgers makes the following report in relation to the shipments of Cuban pineapples through the port of Habana to ports in the United States for the period from January 1 to July 4:

The number of crates going forward was 957,412, of which 714,187 went to New York, 202,655 to Mobile, and 40,570 to New Orleans. This is an increase of 330,355 crates over the shipments during the corresponding period of 1907. During the remainder of the month of July, 1908, the shipments were sufficient to place the total well over the million mark. This great increase over 1907 is due not only to largely increased acreage, but to weather conditions favorable to the growth of pineapples.

Cheaper Gas in British City.

Consul Albert Halstead writes that the recommendations of the gas committee of the Birmingham city council for a reduction in the price of gas in that English municipality will undoubtedly be adopted. With the discount for cash, consumers who use less than 50,000 cubic feet per quarter will pay about 53½ cents per 1,000, while the price for power purposes will be about 36½ cents per 1,000. There are 57,000 automatic (penny-in-the-slot) gas meters in use in Birmingham, and to these consumers 42,000 cooking stoves have been issued.

GERMAN BUSINESS ITEMS.

Consul-General Richard Guenther, of Frankfort, forwards the following German notes concerning commerce and industry:

The managing director of the German Potash Trust estimates that a reduction of 20 per cent will take place in the sales of their products to the United States in the third quarter of this year.

The first electric ferryboat in Germany has just been launched at Duisburg. It has twin screws, which are propelled by an accumulating current from two electric motors of 50 horsepower capacity. The boat can carry 645 passengers, besides horses, automobiles, and vehicles.

The porcelain industries of Kahla, which hitherto enjoyed great prosperity, now complain of a severe slump in business. Although recently a reduction in production has occurred a further contraction of operations is to ensue, so that the factories will work only four days per week.

The Belgian Government will this autumn order for equipment of its railroads 5,000 freight cars, 700 passenger cars, and 220 locomotives. German papers in reporting this news item say that German works last year obtained a large share of similar contracts then given out, but must expect to meet sharper competition from car and locomotive works in other countries.

The German Government, in its interest for the promotion of Germany's export trade, in its official journal calls the attention of German trade circles to the publication of the United States Government entitled "Winning Foreign Markets," stating its objects and the captions of the articles treated. The official notice says that the pamphlet referred to is open for perusal at the chamber of the Department of the Interior (room 174) in Berlin, where it will remain for four weeks, after which it will be sent for inspection to interested parties residing in other parts of Germany.

The first American glass bottle manufacturing machine in operation in Europe has just been exhibited before a number of invited guests (scientists, manufacturers, etc.) at Gerresheim, near Dusseldorf, by a firm which purchased the right of making bottles by this machine for 12,000,000 marks (\$2,856,000) from the American patentees. Hitherto the firm had used the machines which required skilled hands and could only produce 1,500 to 2,000 bottles per day, whereas the later American machine turns out 15,000 bottles per diem and works automatically, thereby saving the employment of 75 skilled glass blowers.

Revised List of the Seaports of the World.

Vice-Consul James L. A. Burrell, of Magdeburg, states that the fourth and fully revised edition of the alphabetical list of the best known seaports of the world has just been published by the Prussian statistical bureau, under the direction of the Prussian Minister of Commerce and Industry. The work contains the names of more than 13,000 seaports, including the different names by which they are known, and the names of the countries, coasts, etc., where situated, as well as their latitude and longitude.

FOREIGN TRADE OPPORTUNITIES.

[Inquiries in which addresses are omitted are on file at Bureau of Manufactures. In applying for addresses, refer to file number.]

Consuls are requested to contribute to this department.

- No. 2553. Smelter furnace.**—One of the American consuls in Latin America reports that the smelter plant of a mining company there is to be enlarged by the addition of another furnace for treating silver-lead ores and forwards the name of the officials who should be addressed in regard to additional equipment.
- No. 2554. Flax-cleaning machines.**—A New York City business house has written to the Bureau of Manufactures that it has received an inquiry from one of its foreign clients as to the names of the American manufacturers of flax-cleaning machines.
- No. 2555. Flour.**—Special Agent M. H. Davis, of the Department of Commerce and Labor, furnishes the name of a British firm of flour merchants desiring to make agreements with American millers with regard to handling their products.
- No. 2556. American goods.**—The Bureau of Manufactures is in receipt of a letter from a commercial house in Portuguese India requesting to be put in communication with American exporters of chinaware, hardware, cotton goods, woolens, silks, hats, trimmings for clothing, sewing machines, photographic apparatus, soda fountains, and machinery of all kinds.
- No. 2557. India products for American import.**—The commercial house alluded to in the preceding opportunity desires to communicate with American firms interested in the import of cashew nuts, nux vomica, linen yarn, and other products indigenous to Portuguese India.
- No. 2558. Hardware, machine tools, and woodworking machinery.**—An American consul in Russia forwards the name of concern there that is interested to hear from American exporters of hardware, machine tools, and woodworking machinery.
- No. 2559. Dry dock.**—Bids will be received until October 15, 1908, by the Ministero della Marina, Rome, Italy, for the construction of a new dry dock and dockyard extensions at the Venice Arsenal.
- No. 2560. Panama Canal supplies.**—Proposals will be received until September 8, 1908, by the Isthmian Canal Commission, Washington, D. C., for the supply of lumber, piles, steel, iron, dredge pinion, iron pipe and fittings, valves, flexible joints, lock nuts, lock washers, bolts, spikes, copper padlocks, casting brushes, scrubbing brushes, scythes, snaths, scythestones, copper hose, steering cable, pulleys, stencils, garbage cans, milk cans, galvanized-iron buckets, kitchen utensils, dishes, cotton goods, thread, desks, chairs, filing cabinets, typewriter stands, draintree, sea-coal-facing, fire clay, plumbago blacking, paint, lampblack, sal ammoniac, sal soda, oxalic acid, prussiate of potash, borax, soap, washing powder, flour, toilet paper, etc. (Circular No. 461.)
- No. 2561. School equipment.**—Deputy Consul-General John W. Dye, of Berlin, reports that, according to the Imperial German Consulate in Madrid, the decree of June 5, 1908, grants about \$38,000 as Government aid for the establishment of common schools in the Spanish cities and towns of Pollos, Bohoyo, Valdevimbe, Eplus, Boecillo, Cabrerotas del Rio, Valdepenas, Avila, Alcanicas, and Orensa.
- No. 2562. Sawmill machinery.**—An American consul in Europe forwards the name of a company there interested in importing American sawmill machinery.
- No. 2563. Wood pulp, steel, leather, scythes, and novelties.**—A business firm in Europe is reported by an American consul to be desirous of communicating with American exporters of wood pulp, steel, leather, scythes, rubber, thread, and novelties.
- No. 2564. Fire-fighting apparatus.**—According to the Brazilian Review, \$100,000 has been granted for the reorganization of the fire department of the City of Bahia. Information may be had of the Associação Comercial in Bahia.

CONSUL LESTER MAYNARD, of Sandakan, reports that the North Borneo Chinese Chamber of Commerce has opened a branch at Kudat, British North Borneo, of which Mr. Chong Nam has been appointed chairman and Mr. Lo Thean Cheok local secretary.

JAPANESE SHIPPING EARNINGS.

PROSPEROUS SHOWING OF THE JAPAN MAIL STEAMSHIP COMPANY.

Consul-General Henry B. Miller, of Yokohama, writes as follows concerning the thirty-sixth report of the Japan Mail Steamship Company, presented to the stockholders on May 27, 1908:

According to the thirty-sixth report of the Nippon Yusen Kaisha (Japan Mail Steamship Company) its gross profits for the six months ended March 31, 1908, amounted to 3,217,982 yen (\$1,602,555), out of which was paid for depreciation of fleet property, insurance fund, ships' structural repair fund, etc., 1,895,312 yen (\$943,865), leaving a balance, including 307,882 yen (\$153,325) brought forward from last account, of 1,630,552 yen (\$812,015). A dividend of 12 per cent was declared, and 310,552 yen (\$154,665) carried forward to next account.

This report is a most creditable showing for this steamship company, when the depressed condition of trade in Japan is taken into consideration. There has perhaps been no period for a number of years when the competition among maritime carriers has been more severe than during this period.

Many holders of this company's shares are permanent investors, who depend upon the dividends as a means of livelihood. It is thus a matter of great importance to keep the rate uniform, and the company has been able to accomplish that throughout the bad times without making any draft upon its reserve for equalization of dividends, which stands, as it has long stood, at 3,300,000 yen (\$1,643,400), so that, though it earned no surplus at all, the company could pay a full dividend for nearly three terms. It is to be observed that the 79 steamers forming the company's regular fleet were supplemented during this term by 9 vessels (aggregating 35,734 tons), which were chartered from the State. The book value of the fleet now figures at something less than 90 yen (\$44.82) per ton.

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COMMERCIAL TRAVELERS.

BRITISH EMPIRE.

UNITED KINGDOM.

[FROM MEMORANDUM OF BRITISH BOARD OF TRADE.]

No permit or license is required to enable commercial travelers from abroad to carry on their business in the United Kingdom.

ADMISSION OF SAMPLES.

DUTIABLE ARTICLES.

Articles liable to duty on importation into the United Kingdom serving as patterns or samples introduced by commercial travelers from the United States and other countries having special treaties with Great Britain to that effect are admitted duty free, subject to the following conditions requisite to insure their being reexported or placed in bond:

1. The officers of customs at any port or place at which the patterns and samples may be imported are to ascertain the amount of duty chargeable thereon. The latter must be deposited at the custom-house in money, or ample security must be given for it. A form of bond has been approved to meet cases in which the duty has not been deposited.

2. On the production by the commercial traveler of a list or declaration containing a description of the samples brought by him, officially attested by the proper authority in the country of exportation, examination of the samples may be limited to ascertaining that they are fully enumerated on the list produced.

3. The list referred to in the preceding paragraph is to be utilized in assessing the duty chargeable on the samples. A deposit of the duty is to be required before delivery of the samples, or alternatively bond for the amount thereof may be accepted instead of a cash deposit.

4. If the commercial traveler is unprovided with the list referred to in paragraph 2, a list is to be compiled giving a description of the samples sufficient for identification and assessment of the duty chargeable thereon. The duty may be deposited or security given as set out in the preceding paragraph.

5. Should the samples bear the marks, stamps, or seals of the country of exportation, no additional marks or seals for identification need, as a rule, be affixed by officers of this department. Contrariwise, if the samples on importation bear no seals, they are to be

marked or sealed for future identification, should such a course be deemed necessary by the officers at the port of arrival.

6. The list of the samples, whether that produced by the commercial traveler or that compiled at the port of arrival, will be signed and dated by the officers at the port or place of importation, who will affix to the list a statement bearing an official seal or stamp and showing:

(a) The name of the port at which the samples are imported and the amount of duty chargeable on the patterns or samples; also, whether it was deposited in money, or whether security was given.

(b) The marks, if any, that have been applied to the patterns or samples.

(c) The date upon which the amount of duty deposited will be carried to the public account, or the amount recovered under the security given unless it is proved that the patterns or samples have been previously reexported or placed in bond. This date is to be not later than twelve months from that upon which the samples were brought into the country.

No charge is to be made for the document issued or certificate by the officers or for marking for identification.

7. *Gold and silver plate liable to assay.*—The foregoing regulations will also apply to all patterns or samples of plate. The deposit to be made or security given is to be approximately equal to the amount of duty formerly chargeable on such articles, viz, gold, 17s. (\$4.14), and silver, 1s. 6d. (36 cents) the ounce Troy.

NONDUTIABLE ARTICLES.

8. *Other articles.*—The production of the list referred to in paragraph 2 will not be required in the case of patterns or samples not liable to duty, and the examination of packages containing such patterns or samples will be restricted to ascertaining that no dutiable articles are therein contained and that the goods produced are bona fide samples.

EXPORTATION OF IMPORTED SAMPLES.

9. Patterns and samples of dutiable articles and of plate may be produced to the customs officers at any port in the United Kingdom for examination prior to exportation. (Nondutiable samples are not required to be produced on shipment.)

10. To obtain the return of the deposit made on entry of the patterns or samples, or the cancellation of the bond entered into, the commercial traveler is required to produce with his samples the list thereof, signed by the officers at the port of arrival. If the time allowed for production—see paragraph 6 (c)—has not been exceeded and the officers are satisfied that the goods as produced are identical with those enumerated on the list, the amount of duty originally deposited may be refunded forthwith. The list is to be noted as to the exportation of the samples, the statement referred to in paragraph 6 being retained.

11. The statement is to be transmitted with a certificate of exportation of the samples to the collector at the port of importation with the object of having an adjustment of accounts effected where a deposit has been made, or the bond canceled, as the case may be.

12. In the case of plate which it may be desired to retain in the United Kingdom, the samples with relative list and statement are,

within the time allowed, to be produced at some custom-house in the United Kingdom with a view to the plate being assayed as required by law. The usual procedure is to be followed if the goods were then being imported for the first time, and on completion of the assaying the deposit is to be returned or the bond canceled.

BERMUDA.

[FROM REPORT OF CONSUL MAXWELL GREENE, OF HAMILTON.]

Commercial travelers are admitted into the colony regardless of nationality.

On arrival they are required, by the rule of the revenue code, to submit their invoices to the customs authorities and furnish a deposit for the payment of same, in the event of their being disposed of in the islands. On departure these amounts are returned to the salesmen. Should any sales have been made, the amount of the duty is deducted from the amount of the deposit.

BRITISH GUIANA.

[FROM REGULATIONS APPROVED BY GOVERNOR IN COUNCIL JUNE 22, 1901.]

No licenses, fees, or taxes are required from commercial travelers visiting the colony. The following regulations have reference to admission of samples of commercial travelers:

1. "Commercial travelers" shall mean and include any person who satisfies the comptroller of customs that he is soliciting orders for goods on behalf of business people outside of the colony.

2. Commercial travelers shall be entitled to obtain a provisional permit for the possession of any articles imported by them into the colony which the comptroller of customs is satisfied are bona fide samples upon their performing either of the following acts, viz:

(1) Deposit with the receiver-general, for subsequent withdrawal on the certificate of the comptroller of customs, the amount of import duty payable upon such samples as certified to by an officer of customs.

(2) Deposit at the custom-house a written guaranty in such form and for such amount as may be approved by the comptroller of customs for the payment of the import duty on such samples as are not duly accounted for at the custom-house before the departure of the commercial traveler from the colony.

3. When the commercial traveler has given notice to the customs that it is his intention to reexport his samples, the following shall be the procedure:

(1) In cases where a deposit of the duty has been made, the receiver-general shall refund to a customs officer, on the certificate of the comptroller of customs, the amount deposited in the first instance, and such officer shall, after he is satisfied that the samples are actually shipped for exportation, repay such amount to the commercial traveler and take from him a receipt for the same which he shall subsequently deposit with the receiver-general.

(2) In cases where a guaranty has been given, a customs officer shall, after he is satisfied that the samples have been actually shipped for exportation, certify the same, and such guaranty shall thereupon be canceled.

4. Nothing herein contained shall deprive commercial travelers of the privileges granted in respect of samples imported by the general public.

* * * * *

8. Other goods imported into the colony as samples may be admitted as samples without payment of duty, provided that the comptroller of customs or the subcomptroller shall be satisfied that such goods are bona fide samples imported in the ordinary course of commercial business, and that the duty payable upon any one sample shall not exceed \$2, and, further, that the duty payable on the aggregate of samples imported at any one time shall not exceed \$5; provided also that when the aggregate duty exceeds \$5 such excess shall be paid in the ordinary way.

9. Having regard to the principles hereby established, in respect of quantities, values, and duties, if any cases of the importation of bona fide samples arise

which are not provided for in these regulations, such samples may be admitted free of duty with the sanction of the comptroller of customs.

BRITISH HONDURAS.

[FROM REPORT OF CONSUL W. L. AVERY.]

Commercial travelers are required to procure a license subject to a fee of \$10 per annum.

The regulations in force as to treatment of their samples are as follows: On arrival a list is furnished the customs officer of all samples carried by the traveler, and the duty is paid in cash, or its payment guaranteed by a bond. On departure the list is checked. Unsold samples are free of duty, while those sold or unaccounted for are subject to duty, which is deducted from the deposit. Samples of no commercial value are not subject to payment of duty. There is no time limit for the exportation of the samples.

BRITISH WEST INDIES.

[REPORT OF BRITISH BOARD OF TRADE.]

ANTIGUA.

There are no special regulations relating to commercial travelers. They are not subject to the payment of any license fees provided they confine themselves to the solicitation of orders from samples and do not carry goods for sale.

No duty is paid on samples if they are reexported when the traveler leaves the island. Upon arriving at the colony a deposit in cash or in the form of an approved bond is left by the traveler with the customs authorities for the amount of duty chargeable on the samples. Upon leaving the island the duty on the articles sold or unaccounted for is deducted from the deposit and the remainder returned to the traveler.

BAHAMAS.

The regulations governing the treatment of commercial travelers and the admission of samples in this colony are similar to those in force in Antigua.

BARBADOS.

Regulations similar to those of Antigua.

DOMINICA.

Regulations similar to those of Antigua. Samples must be reexported within three months in order to entitle the commercial traveler to a refund of duties. Duties paid on goods other than samples are refunded if reexported within twelve months.

GRENADA.

Regulations similar to those of Antigua.

JAMAICA.

[FROM REPORT OF CONSUL F. VAN DYNE.]

No trade license is required nor any fees imposed on commercial travelers in Jamaica. Samples having a commercial value are entitled to a reduction of 25 per cent from the regular duty if remaining on the island. The amount of the duty plus 10 per cent thereof is deposited

in cash with the customs authorities on arrival at the colony, the amount being refunded to the traveler when leaving the colony for all samples reexported by him. If the samples brought happen to be "cut" or of no commercial value, no deposit is necessary.

MONTSERRAT.

Regulations similar to those of Antigua.

ST. CHRISTOPHER-NEVIS.

Regulations similar to those of Antigua.

ST. LUCIA.

Regulations similar to those of Antigua.

ST. VINCENT.

Regulations similar to those of Antigua.

TRINIDAD AND TOBAGO.

Regulations similar to those of Antigua.

VIRGIN ISLANDS.

Regulations similar to those of Antigua.

FOREIGN SALES SUCCESS.

PERSISTENT AMERICANS GETTING BUSINESS IN INDIA.

Consul-General William H. Michael, of Calcutta, cites the following example of how one American manufacturing concern is securing an excellent trade in British India:

The town of Berhampur in Madras Province has taken the preliminary steps toward introducing waterworks for the supply of pure water. The Madras government has sanctioned an estimate of \$103,660 toward the enterprise. A filter company of the United States will put in the filtration plant. This same enterprising company, which has constantly on the lookout for business in India a thoroughly trained mechanic, with fine business capacity, and a corps of assistants, and an abundance of stock available on the ground, is gradually taking possession of the filtration business of the country. Dacca, the old capital of Bengal, and Bangalore, the capital of Mysore State, have decided to install the American system. The truth is that all American concerns offering goods needed in India in the right way are laying the foundation for long continued and profitable business. They are doing it by personal solicitation through American agents, who are capable, deeply interested, and in the field all the time.

Rubber Tires in Caucasian Cities.

Consul W. W. Masterson states that the rubber-tire sales in the Batum district of Russia amount to about \$200,000 annually. The streets of the cities are paved with cobblestones, which necessitates the best tires. Those in use come from Riga and Moscow, and are heavy and tough, lasting with ordinary usage nine months to a year. When they become badly worn they are cut into pieces, strung on strong steel wires, and placed on ordinary public carriages for hire.

OCEAN STEAMSHIPS.

NORWEGIAN-AMERICAN LINE.

PROJECTED TRANSATLANTIC LINE FROM BERGEN TO NEW YORK.

Consul-General Henry Bordewich, of Christiania, advises that endeavors have been made for some time by a number of prominent Norwegian business men to awaken public interest in a steamship line between Western Norway, with the city of Bergen as headquarters, and New York, the plans being as follows:

Their proposition is to form a stock company with a capital stock of about \$2,700,000, to be raised by sale of shares at about 200 kroner (\$53.60) each. The company, according to current newspaper reports, will be organized in the near future. Much attention will not be paid to the emigrant traffic, the intention being to seek the patronage of tourists and other travelers who annually visit Norway in increasing numbers. The trip between Christiania and Bergen over the new railroad can now be made in eighteen hours in the summer season, and the road is already freely used by the tourists. When the proposed steamship line shall have been established, it is expected that it will add much to the usefulness of the road. Two ships of 8,000 tons each are to be employed at first, to make the run between Bergen and New York in seven to eight days. No subvention will be asked from the Government, but it is expected that the State will to some extent employ the line as mail carriers. Attention will also be paid to the freight business.

BARCELONA AND NEW YORK.

PROPOSED DIRECT LINE BETWEEN BARCELONA AND NEW YORK.

Consul-General Frank D. Hill, of Barcelona, furnishes the following statistics of the exports from that Spanish port to the United States and the proposal to make it a port of call for the Messina-New York steamship line:

The following statement showing the quantities of the principal articles of declared exports from Barcelona to the United States during the calendar year 1907 was made up at this consulate-general at the request of people here, who plan, if sufficient cargo offers, to make Barcelona a port of call for their steamers on voyage from Messina to New York. The amounts of the several articles are given in tons: Oxide of antimony, 63; arsenious acid, 1,000; old jute baggings, 735; cotton cloth, 65; cotton cuttings, 43; cotton waste, 606; fireworks, 32; garlic, 26; crude glycerin, 536; jute and hemp waste, 95; lentils, 95; licorice paste, 263; mineral water, 37; olive oil, 20; canned peppers, 20; common salt, 11,400; canned vegetables, 31; walnut wood, 59. Wines, 5,196 gallons. [Names and addresses of principal exporters are filed in the Bureau of Manufactures.]

INDIA has practically a monopoly on the world's production of lac, Indo-China being a small competitor. The government report, recently issued, forecasts a good yield for the current year. The forest department is endeavoring to introduce better methods of cultivation and collection, and claims to have secured good results.

ONTARIO LUMBER TRADE.

DECREASED DEMAND CAUSES HEAVY INDUSTRIAL CURTAILMENT.

Consul R. S. Chilton, jr., reports that according to an article recently published in Toronto, the Ontario lumbermen have decided to reduce the cut of lumber in the bush during the coming winter by 50 to 75 per cent on account of stagnation in the trade and American competition in Canadian markets. The consul continues:

According to this article the cut in 1906-7 was 25 per cent greater than the previous year. A quarter of that cut was left over, either in logs in the booms or as lumber in the yards. When the lumbermen faced the season of 1907-8 they reduced their cut by 25 per cent, calculating that the stock on hand and the cut of the last season would meet all requirements, and it did, for the financial collapse came and the demand for lumber declined as did other products. The article also states:

There is a feature in lumbering operations which must be understood in order to grasp the situation. The operator pays the Crown \$10 per 1,000 feet B. M. and \$2 per 1,000 feet B. M. in addition, or \$12 in all. It is technically called "stumpage." Besides, he pays the price he bids for his limit at the auction sale. When he has paid that price he owns the timber and can cut or hold, just as he pleases. With stumpage at \$12 per 1,000 it costs the operator \$25 to produce 1,000 feet of lumber at the mill—that is, the operations of cutting, hauling, towing, sawing, cost \$13 per 1,000 feet B. M. in addition to the \$12 stumpage. It is easy to see how vast sums of money can be tied up if the lumberman can not get rid of his season's cut.

On the other hand, if the operator foresees that he can not clean out his mill yard, and does not cut, but leaves his timber standing in the bush, he is really making money. He saves the stumpage of \$12, and the operating cost of \$13 per 1,000 feet B. M. More than that, his uncut timber is making money for him because it is increasing in value.

That is the view taken by five of the leading lumbermen in Toronto, who are the largest operators in the Georgian Bay district, which produces some 400,000,000 feet B. M. of Ontario's total output.

COMPARATIVE OUTPUT AND EXPENDITURES.

Last year, 1907-8, according to the Government returns, the Ontario cut was 907,640,000 feet B. M. of pine and 54,080,000 of other timber. The revenue was \$1,500,000, or will be when all is gathered in. Owing to the pinch of hard times some operators have been granted an extension of time.

In the coming season, 1908-9, the cut will be reduced by half, and the revenue also, resulting in a loss to the province of \$700,000, unless the unforeseen happens. It means more in other ways. Roughly speaking, it takes 50 men to cut enough timber in the bush season to produce 1,000,000 feet B. M. at the mill. Thus, the Ontario cut of 961,000,000 feet employed 48,000 men last winter. The coming winter will see but 24,000 at work. These men will be paid from \$15 to \$25 per month. Last year the 48,000 men earned from \$18 to \$28 per month, a total of \$1,056,000 per month, averaging the wages at \$22 per month. The coming winter the 24,000, whose wages will be from \$15 to \$25, will earn \$480,000 per month, a loss of \$576,000 in wages.

The food bill of the lumber army is a big thing. It costs about \$12 per month to feed a healthy lumber jack, and the sum of \$800,000 per month was last year spent among merchants and farmers for food supplies for the camps. The coming season will see it reduced by some \$300,000 per month. Another loss will result from the decreased demand for teams for bush work and their food—hay and oats. Leaving this last out, the monthly loss in food bills and wages will be \$1,596,000. American competition has a good deal to do with the stagnation in the demand for Ontario lumber.

One factor may relieve the situation, viz, extensive bush fires. A fire going through a bush does not burn the timber, but kills it. If cut the same year it can be saved, but it must be done before the worms, which always attack dead timber, get into it.

PORT OF GARSTON.

INCORPORATED WITH LIVERPOOL AND GOVERNED BY ITS COUNCIL.

Consul John L. Griffiths, of Liverpool, furnishes information concerning the growing importance of Garston as a shipping port, of which the following is a condensation:

Garston, a seaport on the Mersey, and about 5 miles from the center of Liverpool, with which it is incorporated, is of growing importance as a coal-shipping center, owing to its proximity to the manufacturing districts of Lancashire, Yorkshire, and the midland counties. There are now two docks in Garston, owned by the London and Northwestern Railway Company, but a third, under construction, will practically double the existing berthing accommodations. Being a railway port, goods are transferred direct from ship to car and from car to ship. When the new dock is completed vessels of 10,000 or 12,000 tons can be accommodated.

By improvements now in progress vessels will not have to wait for high tides, and night work can be carried on. There is a safe and well-buoyed navigable channel from Liverpool to Garston. The port has special arrangements for handling and storing lumber, especially heavy logs. A very large trade in sulphur, copper, manganese iron, and other minerals is conducted through the port. The imports at Garston in 1907 amounted to 666,000 tons, and the exports, including coal, to 2,788,131 tons.

Extermination of Rats at Port of London.

Consul-General Robert J. Wynne states that a report issued in London shows that by order of the British port sanitary authority, in accordance with a scheme for the extermination of the rat plague, 524,379 rats have been killed up to August 1 in the warehouses and vessels in the docks of London, nearly 6,000 having been killed in one month.

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MACHINES AND TOOLS.

FRANCE.

A REPRESENTATIVE CONCERN AT FIRMINY—HIGH GRADES OF STEEL— TOOLS IN USE.

In the following report from Firminy (Loire) Special Agent Capt. Godfrey L. Carden describes a visit to one of the large representative machine plants in the Creusot-St. Etienne region of France:

The iron and steel works known as "Société Anonyme des Aciéries et Forges de Firminy" are very similar to the Saint-Chamond Works. As stated in a previous report the country stretching from Le Creusot to St. Etienne is the Pittsburg territory of France. Iron and steel constitute the important outputs in this region. The writer has not attempted to cover all the firms in this territory, but rather to take representative concerns in various localities. Le Creusot, Saint-Chamond, and the Firminy works constitute three of the most important of these French iron and steel works and, speaking generally, these three plants differ from one another only in the number of men employed. I do not mean to say that each firm has not some distinguishing characteristic: on the contrary, there are features of distinct interest found at each plant, and in the case of Firminy one is impressed with the special grades of steel turned out for automobiles, projectiles, and engine parts.

HIGH-GRADE STEEL PRODUCED.

Director-General M. Adolphe Hugot personally escorted me over the Firminy works and afforded me every opportunity to inspect the plant. This company was organized as early as 1854. It was not then a limited company, but was known rather as "La Société des Aciéries et Forges de Firminy." In 1867 the firm was made a limited company. I found that the Firminy works were employing about 2,800 men. Steel is made here largely on the Siemens-Martin process, and there are two principal foundries for casting. The grade of steel turned out is of very high order, and Firminy is called upon to furnish many of the gun tubes used in French ordnance. This es-

tablishment does not attempt to work up these tubes except in the rough. As might be expected in a steel works of this character, I found a great deal of material in process of manufacture for railways, tramways, and mines. The projectile department is one of the most important in this plant, and the name "Firminy" is well known to American ordnance men. The automobile department confines itself to the manufacture of special steel parts, such as shafting, moving engine parts, axles, and turning gear. Firminy has recently brought out a new steering device.

CHARACTER OF TOOLS USED.

In the foundry and steel shops the tools are of the usual heavy massive type demanded on rough work, and all are either of English or Continental make. The only exception was a Dietrich & Harvey, Baltimore, planer. I found quite a large number of Chicago Pneumatic Tool Company tools in service. Other American makers were represented by Bickform Drill and Tool Company, Cincinnati, drills; Potter & Johnston Machine Company, Pawtucket, R. I., automatic turret turning and chucking machines, and W. F. & J. Barnes Company, Rockford, Ill., drills.

Firminy is using Potter & Johnston automatic tools on projectiles. There are five of these Potter & Johnston machines installed. The Pawtucket house sent a representative to Firminy, I am told, direct from America, and this representative evidently did his work well, for he has placed those five tools in high favor at Firminy. In every instance coming under the writer's notice where an American firm has sent an expert man to a European shop, the visit and instruction given by the representative are referred to in high terms. The tools, in consequence, are worked to greater efficiency and become a subject of shop pride. On the other hand, there are the three American tools (referred to in a previous report) standing in the Saint-Chamond shops, and disliked because they are not understood. In the automobile department I observed a model or duplicate of the crank shaft used in the Firman aeroplane machine. The English firms represented here are Greenwood & Batley, of Leeds; Alfred Herbert, of Coventry; Thos. Shanks & Co., Johnstone, Scotland. The German Grafenstaden works have supplied most of the vertical slotting machines. Bouhey, of Paris, has supplied boring mills.

OUTPUT OF THE PLANT.

Firminy draws iron ore from Algeria and from the Pyrenees. Most of this ore is worked up on the Siemens-Martin system, but puddled steel also forms a part of this plant's output. Another important part of the firm's output is the manufacture of wire for pianos, guitars, and mandolins. In the manufacture of projectile shells are worked up to 42 centimeters caliber.

From all appearances the business at the Firminy shops just now is excellent. This view coincides with the impressions received throughout the entire St. Etienne district. In fact, I am inclined to think that the iron and steel business in central France is more prosperous just now than elsewhere on the Continent. Certainly, the French plants have more work in hand than was apparent earlier in the year in other European sections.

ST. ETIENNE.

WELL EQUIPPED AND EFFICIENT WORKS—NEW PETROLEUM ENGINE.

Captain Carden, in the following report, describes an establishment at St. Etienne, which is within the district in which are located some of the principal machine-producing establishments of France:

Throughout the iron and steel sections of France I observed that many of the heavy tools in service bore the stamp of Biérix, Leflaive & Co., St. Etienne. At St. Chamond, for example, there were no less than 12 Biérix planers in service, capable of handling the largest size of armor plate, and at other shops I noted fine installations of tools from this St. Etienne firm. It was therefore with no little interest that I called at the works of Leflaive & Co., for this is the name now assumed by the house formerly known as Biérix, Leflaive & Co. I was received personally by M. Leflaive, the head of the firm, and in his company was afforded an opportunity to inspect all parts of the works. M. Leflaive informed me that he is employing at present about 900 men, and the shops appeared to be busy. Two new shops are approaching completion; the buildings are up, but the installations have not been effected. The new buildings are for foundry and motor construction, respectively.

AN EFFICIENT STAFF.

Leflaive & Co. are turning out turbine engines of the Curtis type, briquette-making machinery, heavy duty machine tools, boilers, mining machinery, and petroleum motors. The turbine work is carried on under arrangements with Thompson-Houston of Paris. Leflaive & Co., I was told, produce the castings and machine all parts, leaving to Thompson-Houston the supplying of electrical equipment. Judging from what I saw, Leflaive & Co. have as efficient a foundry staff as I have noted on the Continent. I saw some complete castings here of practically all the rigid parts of horizontal engines of, say, 10,000 horsepower.

I have had occasion to remark before that French foundrymen understand casting work to an extraordinary degree of perfection. Leflaive & Co. use almost exclusively Martin steel as turned out by the neighboring French steel mills. For the cylinders of the petroleum engines steel mixed with chrome is used. All tool steel employed here is manufactured by Leflaive & Co. from French steel and is designed for high-speed duty. As a rule one finds only Martin steel manufactured in the St. Etienne district. In the east of France there are a number of Bessemer mills. Observing a Curtis turbine engine in process of construction, M. Leflaive remarked that this was the first Curtis turbine his firm has attempted. It was doing satisfactory work. I noticed a big Rateau blower fan, building for use in the mines, and learned that many others are in construction. The first fans of this system were created here twenty years ago.

BRIQUETTE-MAKING MACHINERY.

Briquette-making machinery has been a specialty of this St. Etienne house for the past ten years. The machines are stoutly built, and the pockets for shaping the coal briquettes are bushed with brass. The coal is fed in dust form and is mixed with coal tar sufficient in

quantity to form a matrix for binding. These Leflaive briquette machines are not manufactured in America, and I understand that the St. Etienne firm will be glad to establish American connections.

The tools manufactured by Leflaive & Co. are for heavy work and comprise planers, horizontal boring mills, vertical boring mills, universal radial drilling and milling machines, heavy lathes for turning shafting and guns of the largest calibers, and heavy multiple vertical drills. The St. Etienne firm does not attempt to make any tools of the small or middle-sized variety. I found many old tools and many which are quite new, for like most European shops Leflaive & Co. are no exception to the rule of holding on to old tools so long as they render good service. This, as pointed out in previous reports, is the general practice on the Continent.

FOREIGN TOOLS EMPLOYED.

I observed the following American machine tools in use by Leflaive & Co.: Bickford Drill and Machine Company, Cincinnati, drills; J. E. Snyder & Co., Worcester, Mass., drills; Cincinnati Machine Tool Company, Cincinnati, shapers; the Acme Machinery Company, Cleveland, threader.

The foreign machine tools included tools of the firm's own make, boring mills from Deutsche Niles, Berlin; turret lathes from Alfred Herbert, Coventry, England; horizontal boring mills from E. Matrot & Co., Joinville. Still others represented were Ducommun, BARRIQUAND & MARRE, Bouhey, Richards, and Rheinecker.

There will be a large number of tools required for the new petroleum shops, and I understand that orders have been placed which will draw on some of our Milwaukee and Cincinnati firms. The new shops for the building of petroleum engines is a connection of the Leflaive firm. The petroleum engines to be built here are the design of M. Sabathé, an engineer of Leflaive & Co. M. Sabathé will manage the new shops. This gentleman has been working for the past ten years on problems connected with the utilization of petroleum engines for marine purposes. At the present time Le Creusot is turning out some petroleum engines on Sabathé designs for the French navy. I understand that the first petroleum engine installed in a French submarine was designed by M. Sabathé.

NEW PETROLEUM ENGINE.

My attention was called to a 750-horsepower Sabathé petroleum engine now being built in the Leflaive shops. The tools to be installed in the new shops now building will be run by one of these Sabathé motors. This will make it possible to have the petroleum engine under constant supervision with a view to noting any defects which may arise. Combustion is effected in these Sabathé engines by compression and not by electric spark. I understand that M. Sabathé has in hand the preparing of designs for a French torpedo-boat destroyer of 500 tons displacement. The design calls for three screws, the outboard screws being operated by two engines placed in parallel, and the center screw by an engine placed forward of the others. The armament consists of two rapid-fire guns of 100-millimeters caliber, six guns at 75-millimeters caliber, and two torpedo tubes. Each engine has eight cylinders, and when cruising at 19-knot speed it is proposed to use the center screw only. For speeds above 19 knots

and under 25 knots the center screw will be stopped, and the two outboard engines used. For speeds above 25 knots all three engines will be brought into play. The designs call for a total engine weight of 220 tons, and at a speed of 14 knots the cruising radius is estimated at 4,800 knots. The fore and aft length occupied by one of these engines of eight cylinders is 11 meters, and the height from bedplate to top of cylinders is 2.9 meters. M. Sabathé estimates that 22 tons of petroleum will suffice for this vessel for a 1,200-mile run, assuming a 14-knot speed, and that the same vessel would use 52 tons of coal for this distance at the same speed. The calculations of M. Sabathé calls for a petroleum consumption at 14-knot speed of 0.185 gram per horsepower per hour. It is estimated that this vessel will develop 850 horsepower effective when making 14 knots, and 9,200 horsepower effective when attaining a speed of 30 knots.

M. Sabathé's designs for marine installation call for one type of engine only of eight cylinders. An engine of his design when making about 300 turns per minute will, he claims, develop an effective horsepower showing of between 2,500 and 3,000 horsepower. For a vessel of 1,000 tons this engine, he considers, can afford a maintained speed of 19 knots on a consumption of petroleum of kilo 0.190 per effective horsepower. For a reciprocating engine using coal, he estimates the coal consumption at 1.200 kilos per effective horsepower. M. Sabathé says that one of these petroleum engines can be reversed in about twelve seconds without need of any special reversing engine. I understand that the cost of one of these 3,000-horsepower petroleum engines delivered at Havre is about 960,000 francs.

RUSSIAN NOTES.

Consul James W. Ragsdale sends from St. Petersburg the following items concerning Russia:

The ministry of finance has issued an order, according to which the export of sugar without an export certificate will be prohibited after August 14, 1908.

The Duma has approved of the Government's plan to establish in China consulates-general at Harbin and Mukden, consulates at Kirin, Tsitsikar, and Dalny, and a vice-consulate at Kwangchengtze.

A competition will be announced in 1909 by the chief engineering board for air balloons, built according to the principle "heavier than air;" 50,000 rubles (ruble = 51.5 cents) will be appropriated for premiums for the best project.

A St. Petersburg millionaire has donated a sum of 266,000 rubles for purposes of investigation in Siberia. An office has been opened at Vladivostok to carry out the purpose of this gift, and branch offices are to be established at several places throughout the district in question.

The section of trade of the ministry of trade and industry has sent a circular request to all exchange committees, asking their opinion on the desirability of introducing on Russian exchanges option deals for grain and cereals. It is expected that this measure will increase the number of foreign buyers, and thus promote export trade.

ACACIA AS MINING TIMBER.

CONSIDERED IN CHINA AS GOOD AS PINE OR CEDAR.

Vice-Consul Ernest Vollmer, of Tsingtau, furnishes the following information concerning the growing of acacia trees on barren land and the use of the timber for mining purposes:

During the ten years of German occupation of the Kiaochow colony one of the most active branches of the Government has been the forestry department. After experiments with a large variety of trees, to determine what would grow best and quickest here, the acacia was chosen as the tree to be used most in the afforestation of the bare hills surrounding Tsingtau. The reasons for this selection were twofold: A tree was wanted to make shade and cover the hills as soon as possible, regardless of its value, and the poor soil precluded the use of a variety which would not grow in almost any sort of earth. While these acacias (*robinia pseudoacacia*) have been growing, more valuable woods of all sorts, adaptable to the climate, were being constantly planted.

In the winter 1906-7 acacias planted in 1902 and 1903 were cut for the first time. All timber up to 5 centimeters (1.97 inches) diameter was sold to the Shantung Mining Company for mining timber. This company has made extensive experiments with the wood, and now reports that for mining purposes the acacia is as good as or better than the pine and cedar varieties now being imported from Japan. The demands of the company are growing from year to year, and are now at 20,000 cubic meters (706,280 cubic feet) per annum. With the satisfactory results of these tests the German Government has decided to go heavily into the acacia raising business here, as there are large tracts of land apparently worthless for anything else. The acacias also have many other good points. Unlike the pines, they are not subject to disease or ravages by insects; furthermore the entire cost of production is covered by the sale of refuse twigs, etc., to the natives for firewood, while the mining company has agreed to take all timber offered at about \$5 per cubic meter (35.314 cubic feet).

German Increase in Population.

Vice-Consul James L. A. Burrell writes from Magdeburg that the population of Germany at the middle of the present year, as just published in the *Statistisches Jahrbuch fuer das Deutsche Reich* amounted to 63,017,000, in comparison with 62,097,000 at the middle of 1907 and 61,177,000 in the middle of 1906. The increase for each of the last years was estimated at 920,000 people. At the last census, December 1, 1905, the population of the Empire amounted to 60,641,278, so that from that time an increase in round numbers of 2,375,000 has taken place. In 1898 the population in round numbers stood at 54,406,000; in the last ten years there has been an increase of about 8,160,000 people, or 15.8 per cent. In the year 1888 the population was estimated at 48,168,000, in the year 1878 at 44,129,000. In the year 1871 there were 40,997,000 people counted, so that now the population since the founding of the present Empire shows an increase of 22,000,000, or more than 53 per cent. The population of the territory now embraced in the German Empire has doubled since 1838.

AUTOMATIC WATER LOCKS.

FOR UTILIZATION ON RIVERS, DAMS, AND CANALS.

Consul William Thomas Fee, of Bremen, furnishes the following information concerning the automatic locks recently built on the Weser and the possibilities of the system wherever there is a fall of water, artificial or natural:

Through the constant deepening of the bed of the Weser on its lower course, the water level upstream having been lowered so much as to cause damage to the adjoining farming country, the Free State of Bremen found it necessary to build a dam at Hemelingen, near Bremen, for the purpose of conserving the water levels of the upper Weser. This dam is provided with two locks, measuring 350 by 12.5 meters (1,148.3 by 41 feet), and 70 by 12.5 meters (228 by 41 feet). The opening and closing of these locks is to be done automatically by an ingenious device which utilizes directly the fall of the river without the aid of power machines. The system employed here can be used wherever there is a natural or artificial fall of water. It is certainly destined to revolutionize the workings of all locks on rivers, dams, and canals.

As the locks at Hemelingen will not be completed before next year, I took occasion to inspect a model of the system, the simplicity and usefulness of which has induced me to report this matter, anticipating that this invention would probably be of use in the United States, especially on the locks of the Panama Canal. The great advantage of this system as applied to the opening and closing of gates of dam or canal locks is that no power machine is needed, and consequently no costly attendants of such machines are required. One man, who need not be even a machinist, can easily attend to the opening and closing of the lock gates; only one cock is to be turned—the rest is the self-action of the system. [In transmitting illustrations showing the working of the locks, which are filed in the Bureau of Manufactures, Consul Fee reports that application has been filed in the United States for a patent covering the system.]

CHILEAN CUSTOM RECEIPTS.

LARGE REDUCTION ON BOTH IMPORTS AND EXPORTS.

In reporting that the customs receipts of the Chilean Government for the first six months of 1908 show a loss of \$1,872,861 gold, Consul Alfred A. Winslow, of Valparaiso, gives the following details:

The receipts for 1908 were \$26,504,401, against \$28,377,262 for 1907. The duty collected on imports showed a loss of \$4,192,410, while from exports an excess of \$2,319,548 was collected. The increased export duty collected is the result of heavy shipments of nitrate to Europe. There was a loss of \$547,500 in import duties collected for June, over the same month of 1907.

The foregoing falls far short of the actual condition in the import business, since at the time of the beginning of the panic the custom-houses were crowded to overflowing, while now they are fairly well emptied. Stocks of merchandise in general in Chile are getting rather low, and it seems that there may soon be a fair opening here for business.

PARCELS POST.

THE CONVENTION WITH FRANCE.

The following order has been promulgated by the Post-Office Department in relation to the parcel-post convention between the United States and France, which became effective August 15:

Parcel-post packages for destination in France will be admitted, on and after August 15, 1908, to the mails for France made up in and dispatched from this country.

"Parcels" exchanged between the United States and France must not weigh more than 4 pounds 6 ounces, nor measure more than 3 feet 6 inches in length, and 6 feet in length and girth combined.

Postage must be paid in full at the following rates, viz: In the United States, on parcels for France, 12 cents for each pound or fraction of a pound; in France, on parcels for the United States, 2 francs for every parcel not exceeding 2 kilograms (4.409 pounds).

A delivery charge not exceeding 5 cents in the United States, or 25 centimes in France, may be collected of the addressee of each parcel.

Parcels for or from France can not be registered.

The parcel-post regulations, as modified by the Postmaster-General's order, dated May 9, 1908, apply to parcels for France.

Two copies of the customs declaration must be attached to each parcel for France, as is required in the case of parcels for Salvador. Parcel-post mails for France will be made up at the post-office of New York.

British Consuls for the Kongo State.

Consul Alfred K. Moe quotes from the Irish Times, of Dublin, the statement that the Kongo Reform Association has been informed by Sir Edward Gray, in response to a communication forwarded to him, that the question of increasing the number of consuls in territories of the Kongo State is already under consideration, and that the British consul at Boma is being consulted. When last heard of the consul was about to start on a tour through Kasai district, and he has been requested to report more especially on the advisability of appointing a resident consular representative for that district. It is also suggested that consuls might report upon the openings and prospects which would admit the introduction of legitimate commercial intercourse with the natives.

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FLOUR MILLING INDUSTRY.

UNITED KINGDOM.

LIVERPOOL FLOUR TRADE—OPPORTUNITY FOR AMERICANS TO REGAIN LOST TRADE.

Special Agent M. H. Davis, writing from Liverpool, July 28, tells of the decline in the sale of American flour at that point, and the opportunity now open to regain the trade. He says:

As freight rates on wheat from all the world's shipping points are slightly less to Liverpool than to any other British port it is quite natural that it should have attracted considerable capital to the construction and operation of flour mills. The industry in this respect has developed rapidly in the past ten years. Most marked has been the increase in milling capacity in the past six years. Liverpool is the best distributing point, all things considered, for Ireland and West of England territory combined for flour and mill feed. The location of the world's surplus wheat supplies has in recent years favored Liverpool, and the mills located in and about this city have signally prospered. Their policy, as followed in recent years, of carrying large stocks of wheat, has been, under prevailing conditions of gradually advancing values of both wheat and mill feeds, a very successful one for profit making. Generally speaking the mills are thought to have accumulated large reserves out of their successful operations and the favoring conditions. The past ten or twelve months, however, is believed to have been a trying period, for competition has brought forth methods and practices that, if not actually productive of continual losses, would be unsatisfactory, not to say discouraging. These relate to sales methods, and all efforts to correct them have failed of accomplishment.

GROWING COMPETITION FOR AMERICAN MILLS.

It is encouraging to note that with the odds apparently against them growing greater from year to year American mills have actually put more flour into Liverpool in 1907 than in 1906, and that 1906 showed a material gain over 1905. However, American flour for the past year shows only about half as much imported into Liverpool as was brought in during 1902 or 1903, and only about one-third as much as came in on the yearly average from 1898 to 1901, inclusive. The statistics, as published here and as already given, do not tell the whole truth as to the American situation, since the shipments of

flour from Canadian Atlantic ports are included with those from the United States. Just what portion should be credited to the United States is a matter of doubt, and I am inclined to think the advantage may lie heavily with Canada. However, the point is that flour other than Liverpool production came here last year in spite of conditions of keenest competition, such as were never before experienced among the local mills themselves, and came in sufficient volume and on its merits, to attract more than passing notice as compared with the three preceding years. The trade in foreign flour shows good growth under adverse conditions such as can not always be present, though it was decidedly under old-time records. The combined United States and Canadian shipments constitute 80 per cent of the foreign flour entering Liverpool. Since so large a per cent of the recorded Liverpool receipts of flour ultimately go to Ireland the figures are of little use as indicating the local conditions of consumption, except as demonstrating that the local mills are not maintaining the hold they naturally should have upon the trade. This is the main point to consider when the matter of encouragement to American mills is up for discussion. The field for American effort is still here and not likely to grow less. The outlook is optimistic and the importers here are looking forward very hopefully for the present season's results.

LIVERPOOL MILLS CATER TO A LARGE POPULATION.

Liverpool's population within a six-mile radius is fully 1,000,000. The flour trade naturally tributary, including ports of Ireland, and coming within the field of effort on the part of importers, probably concerns in excess of 3,000,000 population. The local mills reach out to a wider extent, covering much of the United Kingdom and extending in both flour and feed to the northern European countries. Their capacity for manufacture is not far from 75,000 sacks of 280 pounds each per week, which, if operating full time, would supply the needs of close to 4,000,000 people. While running stronger than has been the custom of American mills in recent years, the local mills have not done as much as their capacity would indicate, though most determined efforts on their part so to do have not been lacking. On the grades and qualities practical of production with the wheats they have to do with milling is overdone in Liverpool. There are six milling concerns in the city proper of capacities ranging from 5,000 to 12,000 sacks per week, aggregating 45,000 sacks weekly, or, say, 64,000 barrels. In Birkenhead, just across the Mersey River, are two large and one smaller mill, totaling 30,000 sacks, or 43,000 barrels weekly capacity. Seven miles up the Mersey, at Ellsmere port, are two new mills built within the past three years, with a combined capacity of probably 5,000 sacks, or 7,000 barrels per week. Liverpool-owned mills, in North Lancashire, can make 7,000 barrels per week, and Chester and Wrexham, near-by points, each can produce nearly as much. Within 100 miles of these mills is a population of 12,000,000 to 15,000,000 people, and there are many smaller mills and some large ones, too, at various points in this most thickly settled region of England. The mills at the ports and, as well, the majority of the inland mills of large capacity, can get their imported wheat over the ship's side into small boats at a minimum of cost, and thence by river or canal direct to their mill doors. These canals,

aside from the Manchester Ship Canal, are controlled as to rates by the railroads, but the saving in handling in bulk and direct from ship to mill is a distinct advantage. The use of home-grown wheat is considerable, but not large in proportion to output among the mills mentioned. The home crop goes mostly to the smaller mills at points more remote from the seaboard.

HOME BAKING NOT GENERAL.

The bread baking in and about Liverpool is in the hands of the bake shops, large and small, as distinguished from home baking. Shop bread and methods seem to suit the people better than baking the bread in their homes, though distribution by vans and carts is not general, as in some other sections of the Kingdom. The individual consumers go to the shops and markets for their bread to a very great extent. In Liverpool there are four large baking establishments comparing favorably with any in other cities, six others of large output, but not in the same class as the leading four, and then there are perhaps several hundred small bakeries with shops attached where 10 to 30 sacks per week are made into bread. In the matter of organization the Liverpool bakeries are easily in the lead, as evidenced by the high prices for bread which they have been able to maintain. They are known to be making money and to be very well satisfied with the existing order of things. They may well be so in view of the fact that the present retail prices, 7d. per loaf for the best bread and 6d. per loaf for the second quality, were established when flour was 4s. a sack, or say 65 cents per barrel higher than it is now. The prices as above are equal to 14 and 12 cents, respectively, for the two qualities, and the loaves are supposed to weigh 4 pounds each. The scale was established nearly a year ago at the high point, and any considerable cutting of price has not been indulged in.

The profit is so considerable that the competition among bakers in view of the restraint on price cutting is in quality, with the result that a greater percentage of high-class flour is used than is ordinarily the case. At first thought this would seem to be favorable to the local mills, who so largely supply and control this trade, but, owing to their excessive capacity and the prevailing methods of contracting for flour, it does not work out wholly to the advantage of the mills. The latter fix prices on the basis of their baker's blend, a second or third grade of their output. It so happens that while mills' prices on this bakers' grade may be very well maintained, the patents or higher grades may be bought and are in fact frequently offered at the same prices as the standard or price basis flour. Under such conditions Liverpool bread ought to be of most excellent quality.

MEDIUM GRADES NOW UNSALABLE—INFERIOR BREAD.

Importers and millers are unable to market medium grades, soft winter wheat straights, Kansas and spring grades being now and for some time past quite unsalable. What American flour is sold is necessarily of the patent grades, but the entire quantity sold here does not represent more than possibly 8 per cent of the flour consumed locally. Yet with the local mills supplying practically the entire trade, and their highest grades going into the bread in greater ratio than usual, it must be remarked that the bread is decidedly inferior

in color, texture, and taste to what an American would call a first-class loaf. This being the case, and I have found many to corroborate my view in this respect, I think in quality alone American mills have an opening to demonstrate what they can do equal almost to the field as they found it years ago. Where they have been handicapped has heretofore been dwelt upon in these reports, and need only be referred to now to give emphasis to the facts that are most important. Trade has been lost largely because of good wheat available to the local mills when American mills had poor crops to contend with, slow and irregular transportation from America, a letting down in quality by a considerable number of mills so that lower prices could be made to attract trade, thus reflecting somewhat on the general reputation of American flour and furnishing arguments to salesmen of local mills who needed just such a basis to fortify themselves in their work of pushing home-milled goods.

THE PRESENT A GOOD OPPORTUNITY FOR AMERICAN FLOUR.

The present is a most favorable opportunity for American mills to assert themselves, granting that crops this season are secured in good condition. The English crop, never an important item, is certainly not promising an excessive yield. It is more than likely to yield several million bushels less than last year. In France the prospect seems to be for considerable less than last year. Australia's crop, a light one, is practically exhausted, so far as exports are concerned. However good the coming crop may prove to be it will not be harvested till December and can not be available for English milling before May of next year. The Indian crop, another stronghold of the British miller, is largely a failure, since the great Punjab district, from which the exports have always come, has but 60 per cent of a crop. The latest reports of India's harvest last March do not promise either low prices nor abundant quantity. Thus to a greater extent than usual the British miller has been anxiously looking to the American Pacific States to meet his needs. There, too, appears a partial failure, as it is estimated that the quantity for export will be 25,000,000 bushels less than last harvest. Russia, too, is decidedly deficient, particularly in soft-wheat grades that would be needed to make up for the lack of usual supplies from the other sources named. The Argentine shipments are growing so light as to excite comment, and her new crop will not be matured until late in December, nor can it reach the mills before March or April next. It will thus be seen that the exceptional advantages enjoyed by British mills for securing at low figures the various wheats they need for blending are not now in prospect as they have been for the three years past. Relatively their position as to price, qualities, and quantities of wheat is nothing like so strong as heretofore.

The opportune time is at hand for the American mills, in a large measure, to regain lost trade, and I have no doubt but that they will make the most of it. To do this effectively will require policies and measures, particularly as to the Liverpool and Irish trade, that should result from very thoughtful consideration. There should be no chances taken with this opportunity. Another year may change conditions more in favor of local mills than heretofore. American mills are now the "outs" and the British mills "in," with all that the term means in a trade sense. The positions may be reversed if

American mills decide wisely and promptly to take advantage of the opening presented.

SHOULD SEND THE BEST AMERICAN FLOURS.

In view of the pressure of competition, and notwithstanding the inherent excellence of well-made American flours, the best that our mills can make will be none too good to reestablish trade. It should be remembered that precedence has been assumed and claimed, and in cases demonstrated, at least to some large buyers, in the matter of quality by the British mills. Results as shown in the bread actually in the market do not justify the claims. But buyers are conservative, slow to change, and can only be influenced by something tangible. It is possible for American mills to make better flour than British mills are now producing or are likely to make for the next twelve months. They should not fail to do this and should get their samples before the trade as soon as practicable. The opening is for all three classes of American product in patent flour—soft winter and hard winter and hard spring. So little of any of these has been sold in Liverpool trade proper that they cut but little figure in local consumption, amounting, as it must, to much in excess of 1,000,000 barrels per year. The mills that can offer the highest qualities will, when once established, be able to command the price necessary to produce the quality. A high basis of quality once established will, if maintained, prove most effectual in holding buyers, and as a general advertising proposition it can not be improved upon, for the goods advertise themselves. The volume of trade possible is so large as to make extraordinary efforts worth while.

Not only is Liverpool a promising field, but the many millions of consumers in central and northern England who do not now and never have used American flour, should be considered as a possible source of increased trade, should conditions continue to favor the crops of the United States and thus strengthen the American millers' position. If our millers do not reach out after this trade, and English mills are obliged to get their supplies to a considerable extent in the United States, a valuable opportunity will be neglected, for relatively our mills will have the advantage. Such British mills as might at any time be buyers of American wheat should, if possible, be induced to buy American flour. They can blend our flour as well as our wheat, and would, I think, do so. If not, the Manchester Ship Canal offers exceptional facilities for delivery of cargoes of American flour into the very heart of England's most populous manufacturing districts.

FEW HOUSES IMPORT FLOUR ALONE—LOW PRICES NECESSARY.

Of the half dozen importing houses in Liverpool, only three are now giving their undivided attention to flour. The others are more or less interested in the importation and sale of grain. All are equipped, however, for an active campaign for the increased sale of American flour whenever the conditions are right. They all agree as to the favorable nature of the prospects at present.

After a careful study of the Liverpool situation I quite coincide with the views as expressed by the importers, that to start trade relatively low prices must be made and higher grades furnished. By higher grades I mean "short" patents as distinguished from

"long" patents. The latter can not succeed here; and as to clears and extra fancies, they, too, should show as much improvement as can be made. The clears made by British mills are very excellent ones, because the extraction of patent is small, and the rougher and low-grade portion of the flour is sold as feed. One importer who has dealt largely with American winter-wheat mills when they commanded the bulk of the trade here, in commenting upon the grades advisable for this market, said that he felt sure he could build up a good trade on a 30 per cent winter patent and a 60 per cent winter clear (made on the basis of 30 barrels patent, 60 barrels clear, and 10 barrels low grade to the 100 barrels), whereas he could do nothing on patent and clear made with the percentages reversed, except to sell occasional lots of patent. A low clear can not be sold at all. He said a 30 per cent patent would sell more freely and command 1s. 6d. to 2s. per sack more than a so-called 60 per cent patent (which he feared was generally nearer 70 per cent than 60 per cent); and for the 60 per cent clear he could get within 3s. per sack of the price of the 30 per cent patent and could find ready sale for it.

SHORT PATENTS—FACILITIES FOR DISTRIBUTION.

Another importer who once handled hard spring flours largely and who is looking forward to the time when he can do so again, urges that if the spring-wheat mills will be able on this crop to make "short" patents of very high quality the importers will get the price required. He assures me that in his opinion a great opportunity is open for a large spring-wheat mill that will put upon the market an "old-style patent," as he terms it, even at 3s. above the present relative values. Another urges the same statement as to hard winter-wheat flour. In fact, so many importers in other markets as well as this talk along the same line of much higher grades that I can not do otherwise than give expression to what they say, especially so since they assure me they believe they will be able in a short time to get an increased price.

While the near-by population in and about Liverpool is 3,000,000 or three times the population of the city and immediate suburbs, it should be remembered that the facilities for distribution at Liverpool put its importers in touch, when trade justifies, with customers with whom they have dealt in some cases for many years, over much of central and northern England containing say 15,000,000 people, as well as with almost every port in the United Kingdom. The six importing concerns remaining to-day in the flour business in Liverpool, out of a dozen or more formerly engaged, have every facility necessary for extending their business as occasion may require. Best of all, they appear much interested in the effort now being made to extend the field of American flour abroad. The following paragraph in this week's circular letter to the trade sent out by one prominent house is expressive:

"The coming season is undoubtedly going to be an American season. American flour will be the best value, the best quality, and the cheapest. Under these circumstances our customers will be well advised to stock our American flour much more largely than hitherto."

FREIGHT ON BRAN TO HAMBURG.

The ocean rate of freight on bran from the United States to Hamburg and other north European points is favorable, as compared with

the 10s. per ton rate from Liverpool to such points, considering the distance. Soft winter wheat bran or hard bran, if broad as the ordinary soft winter bran, would meet the German requirement, as I am informed, and it would seem advisable for American mills to cultivate this trade. It is one of the means by which the British mills keep flour prices down in the United Kingdom, and through which they maintain high feed prices in their home trade. Taking the English flour and feed prices of a few years ago for comparison, they can make a relative cut of 1s. per sack on flour by reason of the higher value of the offals. I am told that there is no German duty on bran. Whether there is or not, the demand is there and in Denmark and Sweden, and large quantities are being exported to these countries by Liverpool and other British millers. I hope American mills will get in line for the exportation of bran, either through their Liverpool representatives, some of whom are already doing large bran trade for the local mills, or through continental importing houses.

ADVANCING PRICES AND CONTRACTS.

A prevailing practice among many of the British mills on the eve of a price advance is to notify their agents of the same. The latter then fill out signed contracts for such quantities as they think their customers might be justified in buying, and send them out to all possible buyers with the old price affixed. When the announcement of the advance is made, a dealer using 30 sacks per week may have on his desk mill contracts at his option to sign, for 500 to 1000 sacks. He may not feel sure of the advance and may hold these contracts for a few days until the next advance is announced. Then he signs up and sends in as many as he thinks he can make hold with the mills. So keen is the competition for his trade that, so it is said, the mills generally let the contracts stand. The buyer gets all the flour he wants at old prices if the market advances; if flour declines, he don't have to take it until he is ready, and if it keeps declining he never is ready. Mills will not enforce the contract for fear of losing a good customer, in event of declining markets. Such methods bear heavily on importers who, to some extent, must meet the terms offered by the local mills.

Under the terms of the contracts offered buyers by the local and other British mills the former have the option of taking any grade at its relative price, the bakers' grade being the basis. Thus a mill can not know positively what flour will be wanted. Such terms the importers naturally can not offer, for they can not carry stocks of the various grades.

LIVERPOOL TRADE NOTES.

It is currently reported in Liverpool that British millers made large purchases, when the market was several cents per bushel lower, of American hard winter wheat for August and September shipment.

Of the American flour coming to Liverpool for local consumption (only about 8 per cent of the total), full one-half of it is Kansas or hard winter variety; of the balance there is some hard spring, but the greater part is soft winter.

The local mills have, generally speaking, established 3 grades of flour—a very high grade patent, a second or medium patent, and a standard bakers' grade. The low grade is a negligible quantity, going mostly into feed. Prices are fixed on Tuesdays and Fridays, but only apply to the standard or bakers' grade.

British mills find a good market for bran in Denmark, Sweden, and Norway for dairy purposes during May, June, and July, when the demand here is slackest. By cultivating this European feed trade they are able to maintain prices at home at full \$5 per ton higher than formerly. The ordinary—not the

rolled—bran goes most generally into the continental ports. The freight rates from Liverpool to Copenhagen and Hamburg are 10s. (shilling=24½ cents) per long ton, 2,240 pounds.

I think a blend of Kansas hard and soft flours, made by such mills as have both wheats at hand, would meet a very considerable demand among such bakers as require a mild flour. There is an extensive field open to enterprise in this direction owing to the fact of so many bakers working on the short system of bread baking; preference would be given to such a patent in many cases.

As showing the difficulty under which flour importers labor when speculation and other causes advance the American wheat markets, may be mentioned the present state of the flour market. Wheat has made an advance recently that must call for an advance in flour of 2s. 6d. per sack, but local mills have only made a nominal advance in flour prices of 1s. per sack. It is purely nominal, since there is very little, if any, buying. Importers can not buy Americans at present in large volume, because they can get no advance from their customers.

On the line of possible new trade an importer well known in America suggested that if some large winter-wheat mill would undertake to establish a trade in Liverpool for household and pastry purposes such trade could be largely developed. Some money would have to be spent in letting the people know of the superior merit for home baking purposes, and the flour would have to be put up in 7-pound packages, shipped in jute cases holding 280 pounds each. The importer believes in the feasibility of the suggestion. He thinks high-class soft winter patents most desirable for household use.

DELAYED SHIPMENTS.

THE COSTLY EXPERIENCE OF A LIVERPOOL HOUSE IN GETTING AMERICAN FLOUR.

Writing from Liverpool on July 29, Special Agent Davis says:

Supplementing my report regarding the flour trade of Liverpool, I submit a letter addressed to me on this subject by one of the oldest houses here engaged in the importation of flour. It is expressive of the situation as viewed by importers generally, though I can say that less complaint is heard here in regard to delayed shipments than at other points. This is possibly because the business with the United States has been relatively small from western points. A considerable part of the trade is done with eastern mills at or near the Atlantic seaboard whose shipments ordinarily make good time. The letter is as follows:

We confirm our conversation about the prospects of an improved sale of United States flours, and also the difficulties under which business is at present worked. In the first place, the competition here is excessive, owing to the over-production of the port millers, and it requires a very big inducement indeed to get local buyers to handle American flours. The 7 or 8 per cent of American flour which is used here at present comes into the hands mostly of the expert bakers, who appreciate the value of these goods as compared with English manufacture, owing to increased yield, etc.; but unfortunately a very large percentage of the English bakers are shopkeepers merely—that is to say, they require a flour ready blended for use without any manipulation on their part.

One or two of the outstanding difficulties with regard to the trade in American flours as compared with that in home flour are, first, the fact that American flour must of necessity come along in fair-sized quantities and be tendered to buyers as soon as it arrives. The meaning of this is that the quay must be cleared within three days of date of tender, and this necessitates buyers storing the flour at, of course, considerable enhanced cost, namely, from 9 cents to 12 cents per sack; this against the English system of giving buyers a contract for four or five different grades of flour at specified differences, and entitling the said buyers to call upon the millers for any grade they require at any time, the flour to be invoiced as delivered. This of course obviates any unnecessary loss of interest or the necessity of having more flour on hand than the buyer wants for his immediate requirements.

INTERESTING EXAMPLES OF TRANSPORTATION DELAYS.

The worst feature in connection with American shipment is, however, the ridiculous and totally unnecessary delay in arrivals which we very often have to put up with, and we can cite to you one or two interesting examples. In September and October of last year we bought large quantities of flour from a "States" miller—a miller, by the way, with whom we do a very extensive business indeed, and whose brands are standard here—and our purchases included a quantity of flour for December-January shipment. At the time these purchases were made we requested the miller to ship the flour in regular lots, so that we might have a constant flow of each brand coming in here, and so retain our customers. The instructions were carefully carried out by the miller, as can be judged from the fact that we had 10,450 bags shipped between December 2 and January 3, inclusive, on no less than twenty separate bills of lading of various dates. In the ordinary course of events the flour should have started coming in gradually about five to six weeks after the first bill of lading date—that is to say, roughly, about the third week in January—but, to our surprise and annoyance, no flour arrived until the 24th of March, when one vessel turned up with the whole 10,450 bags on board.

CONSEQUENCES OF DELAY.

In consequence of this delay we lost a great number of customers, who turned their attention to either other American brands or else to home-milled flours. In addition to that, our sales of these parcels were all at practically the highest point of the market and our customers who had resold were compelled in many instances to cancel sales with their buyers through their inability to give delivery when applied for. We were forced to make allowances; we also had to store a quantity of the flour, and we had in many cases to give three or four times as much credit to our customers as they were entitled to.

Our actual out-of-pocket expenses amounted to between £80 and £100 (£= \$4.86), apart from any risks we ran with regard to financial matters, and we are trying to collect the expenses in question, but do not know whether we shall be successful or not. We lately had another flagrant example of the carelessness displayed by transportation companies with regard to the forwarding of flour parcels, this being an accumulation of 4,500 bags of various brands from the same mill under bills of lading ranging from May 9 until June 5, fourteen in all, at regular intervals during the time mentioned, and the largest shipment on any one was 450 bags. This flour all arrived on July 3, it not being an excessive time on passage, but, at the same time, the annoyance and loss arose from the fact that all the flour had come forward in one bottom instead of coming forward gradually. All this kind of thing could be obviated by the millers giving seaboard bills of lading, and if they would only realize the importance of this we are sure trade here would increase rapidly. As things are at present buyers never know when they will get their flour if it is bought for shipment, and they also do not know whether they will get it in small lots or in ridiculously large quantities.

We are afraid the millers in the States do not realize what heavy expenses there are at this end in handling. Anything you can do in the interests of the import trade we are sure will be very much appreciated, as it has for a long time been a declining business, and it will need some better facilities with regard to shipments, etc., if any good is to be done.

Suez Canal Prosperous.

Consul-General Robert J. Wynne makes the report that the returns of shipping and tonnage of the Suez Canal from London show that British tonnage passing through increased 1,195,937 in 1907 as compared with 1906; the increase of German tonnage was 98,099. The net tonnage also exhibits an all-round increase, the figures for the past year showing an increase of 1,282,930 tons as compared with that of 1906 and an increase of 1,594,329 over 1905. Receipts during 1907 showed an increase of \$1,557,000 as compared with 1906. This increase, the returns set forth, was not due to abnormal causes, but to the general activity of trade during that year.

CHIHUAHUA SHOE TRADE.

AMERICAN MAKES HAVE A STRONG FOOTHOLD ON MEXICAN MARKET.

Consul Lewis A. Martin, of Chihuahua, submits the following information and suggestions in regard to the trade for American shoes in that Mexican district:

Shortly after coming here it was observed that there were large stocks of shoes on exhibition in the various business houses of the city, and I had a desire to know whence the goods were procured. This being an inland consulate there were no statistics available, and it was determined to make a personal inquiry among the dealers to procure the data on the shoe business. This city is said to contain a population of 40,000 inhabitants, among whom is a considerable number of Americans, some Germans, and a few of other nationalities. This city, also, has large patronage from the mines in the surrounding country.

It was surprising to find upon examination of the different business houses handling shoes, that some of them have total sales of as much as \$50,000 to \$60,000 in a year, in gold. The concern selling the largest amount last year is exclusively a shoe house. Another large dealer in shoes, the owner of a department store, stated that his sales during the calendar year 1907 amounted to \$53,944. These goods were practically all bought in the United States, principally in St. Louis, New York, Boston, and Lynn. Interviews with nine or ten of the principal dealers for the past year reveals an aggregate amount of \$200,612, a good showing for this city, and they were all American shoes. A number of other small dealers in shoes, persons doing a mixed business, were not interviewed on the subject.

One or two houses stated that they had heretofore made a few small purchases from Spain, but that the shoes from that source did not take well in this market, and since that time they had confined themselves to the American makes.

POPULAR STYLES—NATIVE SHOE FACTORY.

One dealer said: "You can say that all the styles used in the United States are popular here." On the plaza, when the large crowds of people are gathered there, one sees every variety of style in shoes which are used in the United States. Many men and women use the white canvas shoe, and also the different shades of tan, made principally from the vici, while great quantities of black shoes are worn, in plain black leather and patent. The better class of Mexicans, men and women, wear the finest and best to be had. The low-cut shoe is the universal favorite here, both in summer and winter. One dealer said that the Mexican young ladies were partial to the very high heels, adding: "You will not sell a medium heel to a Mexican girl of the better class, and many of the American ladies wear them, though most of the American women like a medium heel."

There is a shoe factory in this city that claims to have a capacity of 200 pairs daily, with a present output of 80 pairs. This firm makes only a cheap, rough shoe from Mexican leather. The capital invested is \$37,500 gold; 35 hands are employed, all Mexican except the foreman, who is an American. The plant is equipped with American machinery. A small portion of their output is sold in

this city. It is claimed for these shoes that they are very satisfactory with the laboring people, being strong, durable, and comparatively cheap. The production has been solely for men, but it is intended to enlarge the plant in the near future and include the manufacture of a finer article, and also make women's and children's shoes.

OPPORTUNITIES FOR TRADE EXTENSION.

The trade in shoes in this district is a growing one. Many of the natives are discarding the primitive footwear and adopting the American shoe. Many of the poorer people still wear sandals, consisting of a plain piece of leather or raw hide, fastened to the bottom of the foot by means of deer hide thongs. This is simply to protect the bottom of the foot from injury. These natives, however, when they see the better or wealthier class adopt a certain style of apparel, have a desire to follow suit; and, as the American shoe is used exclusively by the wealthier and better class of society, the others without doubt will follow their lead as soon as they are able to do so. Now is a good time to push the shoe trade in this section and American manufacturers and jobbers should make sure that they have a firm hold on the trade.

The matter of trade extension should not be confined to circulars or advertising matter, although some advertising is desirable. Formerly much of this literature came printed in English, which has no meaning to the average Mexican merchant. For Chihuahua it is recommended that these advertisements be printed in Spanish and English, say in parallel columns, describing the merchandise so that they may be intelligently read in either language. The best way to sell goods and enlarge trade in Mexico is to send effective salesmen who come in contact with the dealers here; men who speak both languages well.

INDIA'S JUTE CROP.

FIRST FORECAST SHOWS CONSIDERABLE REDUCTION IN AREA.

Consul-General William H. Michael, of Calcutta, states that the preliminary Government forecast of jute for 1908, covering Bengal, East Bengal, and Assam, on July 6th shows the following comparative returns:

	Area sown.		Condition of crop.		Area sown.		Condition of crop.
	1907.	1908.			1907.	1908.	
BENGAL..				EASTERN BENGAL AND ASSAM.			
Khulna.....	37,500	16,700	Fair.	Jalpaiguri ...	125,500	103,500	Generally poor.
Nadia.....	93,000	42,900	Do.	Bogra.....	200,000	110,000	Good.
Howrah.....	61,700	\$3,900	Poor.	Dinajpur.....	143,000	105,429	Fair.
Hoghly.....	65,000	51,900	Do.	Dacca.....	312,000	247,700	Do.
Muzaffarpur ..	4,000	1,800	Moderate.	Faridpur.....	125,000	136,000	Fair to poor.
24-Pargans.....	86,400	59,000	Poor, except one.	Noakhall	29,500	6,500	Do.
Murshidabad ..	95,400	30,562	Poor to fair.	Nowgong.....	1,600	1,500	Good.
Cuttack.....	17,600	13,900	Fair.	Tipperah.....	310,600	234,400	Fair.
Chumpanan ..	5,800	2,000	Poor.	Pubna.....	154,300	117,400	Good.
				Mymensingh..	847,100	718,000	Do.

JAPANESE MACHINERY EXPORTS.

RAPID PROGRESS IN MAKING MECHANISMS FOR ORIENTAL NEEDS.

Consul-General Henry B. Miller, of Yokohama, submits the following report on the export of machinery from Japan:

The British commercial attaché in Japan says:

The export of machinery from Japan continues to advance yearly, the total in 1907 (\$1,177,693) showing an increase of \$447,718, or 61 per cent over the preceding year, and of nearly 250 per cent over the average of the last five years. The bulk consists of cotton gins and printing machines, which go to China, but Japanese workshops are now turning out various other kinds. Many of them may be fairly described as copies, more or less accurate, of foreign models. On the other hand, it must be admitted that the Japanese are often very clever in thinking out and executing labor-saving appliances. In a violin factory at Nagoya, where some 8,000 instruments are annually turned out, ranging in price from \$1 to \$60 apiece, there were several simple machines at work, all, it is stated, invented by the proprietor and his employees, while it must be remembered that most of the tea-firing machinery used in the country is also admittedly of Japanese invention.

In relation to the foregoing I have to say that the Japanese customs returns show the exports of machinery during the past two years were as follows: \$729,975 in 1906, and \$3,362,219 in 1907. Of the 1907 exports, however, \$2,184,526 classed as machinery was really steam vessels made in Japan for China, thus leaving the pure machinery exports as reported in the British commercial attaché's report.

LINE OF EXPORT.

The exports of machinery are classified as follows: (1) Printing machines to China, Korea, Hongkong, and the United States of America; (2) cotton gins to China and British India; (3) electric dynamos and motors to China and Korea; (4) spinning and weaving machines to China, Korea, and British India; (5) scientific instruments to China and Korea.

This advent of Japan into a machinery exporting country is a new phase of her industrial development, and rather a peculiar one when it is realized that the iron and steel necessary for making this machinery must be imported from foreign countries, either Europe or America.

There is a gradual development of the production of machinery in Japan along the lines of machinery used extensively within the country itself and generally throughout the Orient. Quite an extensive new machinery plant is being erected in Nagoya by the Mitsui Bishi Company for the production of cotton spinning and weaving machines. They expect not only to produce machines of this type for use in Japan but propose also to produce for export to China and British India. They claim to be able to produce a machine better fitted for the quality of cloth produced, especially for the oriental trade, as well as being designed especially to manufacture the cotton of India and the United States combined, than the foreign-made machinery which they assert does not handle this cotton to advantage.

MACHINERY SUITED TO ORIENTAL NEEDS.

The company erecting this plant for the production of cotton spinning and weaving machinery has extensive cotton spinning and weaving factories in Japan. The concern studies the particular quality of goods suited to the markets of the Orient and purchases

the cotton in the cheapest markets of such quality as will produce goods for the oriental trade under the most economic conditions, and manufactures machinery especially to fit the raw material and produce the particular type of goods that the market requires. It is in the particular and detailed study of the conditions of oriental markets and productions that the Japanese are likely to have the advantage over foreign manufacturers of machinery.

I found on a visit to the silk habutae district that machinery was being introduced for the production of habutae that is likely to soon do away largely with the hand method of production now generally used throughout the country. Steam power and water power was being applied to weaving, sizing, drying, bleaching, and producing the thread from the cocoon. The first of these machines are imported, usually from Europe, and from these models they design and produce in Japan machinery modified to some extent, and of a cheaper quality, for doing the same kind of work.

There seems to be little doubt that, with the progressive spirit of the Japanese in the introduction and production of machinery that hand work in all possible lines will ere long be supplanted by machinery and factory methods. It is clearly evident from the expansion of the export of machinery from Japan to Korea, China, and British India, that they will carry on machinery production with some degree of success. Whatever success they achieve I feel convinced will be the result of producing machinery of a lower price and, from our point of view, inferior quality, but especially fitted for the conditions of the oriental market.

IRISH LIVE-STOCK EXPORTS.

FALLING OFF IN SHEEP—INCREASE IN CATTLE AND SWINE.

Consul Henry S. Culver, of Cork, transmits the following extracts from the annual report of the department of agriculture relative to the exports of live stock from Ireland:.

The gross total of the exports from Ireland last year of cattle, sheep, swine, goats, horses, mules, and asses was 2,025,292. This amount falls short of the annual average, 2,198,953, for the decade ended in 1907. So far as the export of cattle is concerned, the total for 1907 may be considered a satisfactory one, the figure reached 843,010, having been exceeded only twice in the decade.

In the sheep exports, however, there has been a decline in recent years. In 1902 the total number of sheep shipped from Ireland reached 1,057,943, while in 1907, 666,363 sheep were exported. A decrease, however, of practically the same amount took place in the stock of sheep kept in Ireland, the figures being, in 1902, 4,215,865, and in 1907, 3,816,609, and it is reasonable to assume that this diminution accounts for the reduction in shipments. The swine exports for 1907 are over 50,000 head in excess of those for 1906.

The recovery in the Irish live-stock trade, which was noticeable during the year 1906, has been well maintained. The prices obtainable for cattle showed an upward tendency toward the end of the year, and on the whole, well-finished beasts realized sums which afforded feeders an encouraging margin of profit. There was a brisk demand at fairs and markets for young, well-fed cattle. The price of sheep ruled high in Irish markets during the early months of the year. Later the value of sheep dropped. This, in some measure, may be accounted for by the fall in the price of wool. In order to meet the requirements of victualers in Ireland the importation of sheep from Scotland was very considerable. As compared with the year 1906, and taking the Irish railways as a whole, there was an increase in the number of animals carried over the lines during the period under review. This was particularly noticeable in respect to cattle and swine.

TRADE OF KOBE.

NOW FIRST PORT AND FIFTH CITY IN THE EMPIRE OF JAPAN.

In transmitting statistics, entitled General View of Kobe, prepared and issued by the Chamber of Commerce of that place, illustrating the phenomenal growth of what forty years ago was a fishing village, Consul Hunter Sharp comments thereon as follows:

The review shows that Kobe is now the first port in the empire, with a population not far from 400,000. Not only in the foreign trade, but still more in the coasting navigation, the tonnage entering and clearing from Kobe is largely predominant over Yokohama, despite the fact that the latter city was founded ten years earlier.

In the value of exports Yokohama leads, but in imports the case is reversed. The lead taken by the former city in exports is due to the silk trade, of which it still possesses the virtual monopoly. Silk runs into large figures, but occupies a small bulk; therefore, on turning to the actual tonnage of the exports and imports, Kobe is far ahead of Yokohama.

The exports for Kobe to the principal countries in 1907 were as follows, according to value: China, \$15,000,000; the United States, \$10,000,000; Hongkong, \$7,000,000; the United Kingdom, \$4,250,000; Germany, \$3,375; India, \$3,000,000.

The imports at Kobe from the principal countries were as follows in 1907: United Kingdom, \$25,000,000; British India, \$24,000,000; United States, \$19,000,000; China, \$13,000,000; Germany, \$11,000,000.

The following statement shows the imports and exports of Japan in 1907, by ports:

Ports.	Imports.	Exports.	Total.
Kobe	\$111, 271, 908	\$53, 120, 796	\$164, 392, 704
Yokohama	85, 862, 562	102, 533, 237	188, 395, 799
All other ports	49, 110, 280	59, 687, 577	108, 797, 857
Total	246, 244, 740	215, 341, 610	461, 586, 350

BANK RATES IN COLOMBIA.

CREDITS, EXTENSIONS, DISCOUNTS, DRAFTS, AND INTEREST.

Consul-General Jay White, of Bogota, furnishes the following concerning banking usages and charges in Colombia:

Six months is the approximate length of time granted before bills are due. Legally, extension is forbidden in the payment of drafts in Colombia. If, however, the creditor is willing, extension is granted for an indefinite time, that is, payment is requested, as usual, of the drawee at his earliest convenience, and interest charged. The usual discount for cash is 6 per cent. The banks in Colombia are accustomed to charge a premium of 50 cents gold for any draft which does not amount to \$5 gold.

As a general rule foreign firms charge 6 per cent per annum interest on accounts past due for merchandise sold in Colombia.

The present general bank rates of interest on loans (gold) is 1 per cent per month; on paper-currency loans it is somewhat higher.

FOREIGN TRADE OF TSINGTAU.

IMPORTS AND EXPORTS IN THE FIRST QUARTERS OF PAST TWO YEARS.

Vice-Consul Ernest Vollmer, of Tsingtau, furnishes the following statistics of the foreign trade of the port during the first quarters of 1907 and 1908:

I transmit herewith statistics from the imperial maritime customs covering the imports and exports of Tsingtau (Kiaochow) for the first quarters of 1907 and 1908. The figures do not show the decline which might be expected when the business depression of China is taken into consideration. It must not be forgotten, however, that the entire trade of the port, so to speak, is transit, being a movement of goods to and from the Chinese territory beyond this German colony. Thus, while the period in question can not be described as a good one from the standpoint of the merchants residing in the district, the railway has had large quantities of merchandise to carry. These goods represent mainly the imports and exports at one time handled over Chefoo, but now coming into trade via Tsingtau, owing to superior transportation facilities offered by this port.

IMPORTS AND EXPORTS.

Statement showing the imports into Tsingtau during the first quarters of 1907 and 1908:

Articles.	1907.	1908.	Articles.	1907.	1908.
Cotton goods:	<i>Pieces.</i>	<i>Pieces.</i>	Cotton goods—Continued.	<i>Pieces.</i>	<i>Pieces.</i>
Shirtings, grey, plain.....	94,213	105,897	Printed drills, furnitures,		
Sheetings, American.....	54,380	25,150	and twills.....	2,871	7,804
English.....	5,550	6,340	Printed T-cloths.....	24,742	11,741
Indian.....	5,875	600	Cotton Italians, plain.....	55,144	53,115
Japanese.....	5,200		lastings.....	2,740	974
Shirtings, white, plain.....	12,810	15,575	Italians, figured.....	11,625	11,680
Drills, American.....	3,389	1,120	lastings.....	32,671	36,008
English.....	555	215	Dyed turkey red cambrics... shirtings.....	4,876	12,238
Japanese.....	1,400	540		15,475	23,558
Jeans, American.....	3,220	1,425	Sheetings, Shanghai.....		10,200
English.....	13,470	13,614	Woolen goods:		
T-cloths, 32 inches.....	98,111	64,990	Lastings.....	632	410
Japanese.....	4,620	5,400	Long ells.....	315	160
Lawns, white.....	760	80			
Printed chintzes and plain prints.....	8,088	13,064			

Cotton yarn to the amount of 5,353,915 pounds in 1907 and 7,710,542 in 1908 was imported from Japan, Shanghai, and India. Among the principal other imports were kerosene, of which American oil amounted to 821,873 gallons, against 398,510 gallons of Sumatra oil, in 1907. No American oil was imported in 1908, while 1,479,710 gallons of Sumatra oil were imported. The other foreign goods imported of any consequence were: Iron and steel, dyes, matches (from Japan), mining materials, railway plant and materials, etc.

The exports of Chinese products consisted of coal, ground nuts, medicines, cowhides, vegetable oils (ground nuts and bean), silk (refuse), pongees, yellow, and wild, 313,348 pounds and 214,360 pounds), goatskins, straw braid, walnuts, etc.

In the foregoing estimates no account is taken of goods imported and exported in Chinese junks.

BOHEMIAN RAILWAY EARNINGS.

DECREASED PROFITS THIS YEAR—OPERATING EXPENSES INCREASE.

Consul Joseph I. Brittain, of Prague, furnishes the following information concerning the railways centering in Bohemia:

The statistics of earnings for the first six months of 1908 shows a decided falling off in the receipts as compared with those of the previous year. It is claimed that the business during the second half of the year 1908 will largely retrieve the loss during the first six months, as during the latter part of the year the crops will be moved. It is doubtful whether the claim will be realized.

The passenger traffic of the Staatsbahn shows an increase of 261,252 passengers, while there was a falling off in freight tonnage of 263,449 tons, as compared with the period during the previous year. The tonnage by the river Elbe was also less in consequence of the low stage of water.

Within the past year there has been a decided increase in the operating expenses of the Austrian railways, owing to a general advance in wages paid for all sorts of labor connected with the service, and also in consequence of the increased prices for materials.

With the exception of the first-named railway, all the roads practically center in Bohemia. The following were the receipts during the first six months of 1908:

Line.	Receipts.	Increase (+) or Decrease (-).	Line.	Receipts.	Increase (+) or decrease (-).
Sudbahn.....	\$12,618,480	—\$95,410	Buschtehrad A.....	\$874,980	+\$10,150
Staatsbahn.....	6,575,170	—265,930	Buschtehrad B.....	1,530,620	— 6,090
Nordwestbahn.....	2,813,580	— 91,350	Aussig-Teplitz.....	1,904,140	+ 89,320
Elbethalbahn.....	1,831,060	— 56,840	Böhmische Nordbahn	1,165,220	+ 34,510
Süd-norddeutsche.....	954,100	— 10,150			

The first column indicates the total receipts for the respective periods, and the second indicates the decrease or increase as compared with the same period during the previous year.

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